

BOOK SHARING IN THE PRETERM MOTHER-INFANT DYAD:
A DESCRIPTIVE ANALYSIS OF THE SOCIAL DYNAMICS

BY

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by

Patricia Montgomery Aaron

To my family

Mama,

(in memory of) Daddy, whose loving spirit embraces us,
Patrick, Arnold, and Ernie.

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This study is an analysis of book sharing in a sample of 13 low-SES mothers and their 6-month-old infants who were born prematurely and high risk for developmental delays. The purposes were to (a) describe the experience, (b) draw inferences about how interactions influence emergent literacy development, and (c) provide a context from which to advise parents how to effectively involve their baby in book sharing. The episodes were audio-videotaped in a clinical living room play area. The analysis focused on participants' responses to the request, "Would you please share a book with your child?"

Findings revealed that

- Book sharing was a teaching-learning event. A three-phase activity format encompassed the mothers' efforts to introduce their babies to traditions for interacting with a book.

- Two interaction patterns emerged: Task-related exchanges gave the appearance of sharing ideas (communicating) that referenced the book. Nontask related exchanges gave the appearance of opposing ideas (not communicating). Grouped by their dominant patterns, there were four communicative, three marginally-communicative, and six noncommunicative dyads.

- Communicative mothers entrained the dyad in a flow of task related exchanges by responding to their infant's spontaneous behavior as if the child made an appropriate gesture toward the book. Marginally communicative mothers had difficulty synchronizing their exchanges. Due to prolonged negotiation of their roles, the infants withdrew before the dyad could entrain in a flow of task related exchanges. Noncommunicative mothers failed to synchronize with their infant's behaviors; consequently, book *sharing* was out of reach.

- The variations in episodes indicated that the mother is primary agent of information. However, the infant is coconstructor, in that failure to synchronize with the baby impedes, if not completely prevents, book sharing.

These descriptive data further awareness of how book sharing contributes to emergent language development and the acquisition of cognitive and instrumental skills associated with interacting with a book. Findings provide a basis for recommending models of book sharing that promote interaction styles presumed to foster optimal teaching-learning outcomes and discouraging interaction styles that are associated with negative outcomes.

CHAPTER I THE PROBLEM IN PERSPECTIVE

Background to the Study

Research findings demonstrating that reading to preschool children positively contributed to their literacy development encouraged educators and child development specialists to recommend that parents read to their babies (e.g., Barton, 1986; Butler, 1980; Dinsmore, 1988; Dzama & Gilstrap, 1983; Gardephe, 1995; Gutfeld, Sangiorgio, & Rao, 1993; Israeloff, 1995; Kupetz, 1993; Lamme, 1980; Machado, 1990; Trelease, 1982, 1989, 1995; Umansky, 1993; Wahl, 1988). According to Hurst (1996), parents can help their child become a better reader by reading to him or her from the time of birth. Trelease (1982) wrote, "You may start the first day home from the hospital, and certainly you can begin by 6 months of age" (p. 30). Lamme (1980), recognizing infancy as a time when habits originate, asserted:

If reading becomes a part of their regular, daily routine . . . a foundation has been laid for routine reading during the toddler years when the child makes more of his/her decisions about what to do. Many basic skills necessary for reading can be learned before the age of 1. (p. 22)

The persuasiveness of research also influenced publishers and parents. Bolstered by reports that the younger the age at which children are read to is a strong predictor of their language skills (DeBaryshe, 1993), parents are inundated by a market of books, kits, and courses on how to teach

babies to read (Zigler & Stevenson, 1993). A new market of books for infants (Dinsmore, 1988) and "baby lit" books for infants as young as 2 months (Jordan & Mercier, 1987) emerged, followed by lists of recommended reading (e.g., Books for Babes Committee, 1995; Jeffery & Mahoney, 1989), and "lapsits" designed by public librarians to help parents introduce their babies through age 24 months to appropriate literature (Jeffery & Mahoney, 1989; Salem Public Library, 1996). Today, literature for babies is purchased by parents and grandparents who are convinced that America's children are learning to read on their parents' knees. However, despite professional and public enthusiasm for recommending reading to infants, the nature of the interaction (i.e., what transpires when parents read to babies) is largely unknown. Hence, the usefulness of the advice, "Read to your infant," may be limited by our inability to define the experience in terms of the social behaviors that characterize the activity.

Teale (1984) noted that the interest in parent-child reading swelled from studies that only indicated a link between reading aloud experiences and children's subsequent literacy skills. For example, research demonstrated a positive relationship between preschool children's experiences in hearing stories read and later fluency in oral and written language (Chomsky, 1972; Irwin, 1960). Story time experiences reputedly stimulated prereaders' interest in literature (Walker & Kuerbitz, 1979), as well as increased their desire to read for themselves (Mason & Blanton, 1971). Most common among children who learned to read prior to formal instruction in school (Bissex, 1980; Briggs & Elkind, 1977; Clark, 1976; Durkin, 1966; Krippner, 1963; Plessas & Oakes, 1964;

Teale, 1978; Tobin, 1982) and children who were most successful in learning to read in school (Durkin, 1974-75; Sutton 1964, Walker & Kuerbitz, 1979) was that a parent or older sibling had frequently read to them during the preschool years. In these studies, "researchers were concerned primarily with how many times a parent and child engaged in interactions involving printed material rather than the particulars of what happened during those interactions" (Teale, 1984, p. 111).

Expressing the need for descriptive studies, Teale (1981) stated,

The detailed descriptions of story book reading events are necessary for they provide sources of information from which we can draw conclusions about the nature of activity which seems most felicitous to further children's literacy development. (p. 908)

Purpose of the Study

The purpose of this study was to describe the nature of book sharing in a sample of 13 mothers whose infants were born prematurely and sick. Specifically, the study was designed to (a) provide a descriptive analysis of the social interaction that characterized book sharing, (b) draw inferences about what and how interactions between mother and baby influence the child's emergent literacy development, and (c) provide a contextual source from which professionals who serve the preterm infant population may advise parents on how to effectively involve their baby in book sharing.

Statement of the Problem

In response to Teale's (1981) call for descriptions of parent-child reading, researchers noted qualitative differences in the social organization and language features of reading episodes (Heath, 1983; Lennox, 1995; Pellegrini, Brody, & Siegel, 1985; Porterfield-Stewart, 1993). Such reports supported Teale's (1984)

notion that reading to children is not a routine that is common to all episodes. Furthermore, there is evidence that the child's language (Kertoy, 1994) and the child's ability to benefit from the experience (Allison & Watson, 1994) are influenced by the style of adult-child interactions occurring as books are read. This evidence supports the idea that children's competence originates in different interactive styles around the book, thereby lending credence to Teale's (1981) assertion that descriptions of the social dynamics are necessary to further our understanding of how the experience contributes to emergent literacy development.

More than a decade after Teale's (1981) admonishment, studies of parents reading to infants (children under the age of 2 years) are scarce. The few published reports have primarily included middle-class mothers reading to babies who were born full term and healthy; only one study (Resnick et al., 1987) has included babies who were born prematurely and sick. The dearth of information specific to reading in the preterm infant-mother dyad presents a significant problem in the sense that generalizing descriptions of book reading from full to preterm mother-infant dyads assumes that interactions are the same across populations; hence, findings are interchangeable. Data do not support this assumption (Gardner & Karmel, 1983; Rocissano & Yatchmink, 1983). Rather, literature comparing social interactions in full and preterm mother-infant dyads is replete with evidence of "less optimal" (Friedman, Jacobs, & Werthmann, 1982) and "disturbed" (Field, 1979) patterns among mothers and their infants who were born prematurely and sick. Storybook reading between a mother and her infant is considered an interactive literacy event. Therefore, the history of atypical social

patterns reported among preterm infant dyads suggests that if the advice, "Read to your infant" is to benefit babies who were born prematurely and sick, the practice needs to be described within this population.

Assumptions and Questions Guiding the Inquiry

The focus of the present research was on the practice of joint book reading, referred to as book sharing hereafter, in the preterm infant-mother dyad. The research objective was to describe the social dynamics of book sharing in a sample of preterm infant mother dyads.

The following assumptions undergirded this study:

1. The nature of the social dynamics of book sharing is unknown in the preterm mother-infant dyad (i.e., we do not know how mothers and their infants, who were born prematurely and sick, transact the event).
2. Book sharing is a cultural construct, projected through the interactions of its participants; therefore, it is capable of being understood through the observable expressions and conduct, wherein the experience derives its character.

One broad question guided this inquiry process: What features characterized the social dynamics observed in book sharing episodes of 13 mothers and their 6-month-old infants who were born prematurely and sick? Four specific questions were addressed:

1. What behaviors did a sample of 13 mothers of preterm infants employ in response to the request, "Would you please share a book with your child?"

2. How did a sample of 13 mothers of preterm infants format their behaviors to carry out book sharing with their preterm infant (i.e., what structural organization characterized book sharing)?

3. What features characterized the verbal and nonverbal expressions and conduct employed by a sample of 13 mothers to carry out book sharing with their preterm infant (i.e., how did the mothers mediate book sharing with their infant)?

4. What themes characterized the semantic content of the verbal and nonverbal expressions and conduct employed by a sample of 13 mothers to carry out book sharing with their preterm infant (i.e., what topics dominated book sharing)?

Design of the Study

Qualitative research methods were selected to study book sharing in the preterm mother-infant dyad. The research focused on verbal and nonverbal behaviors that participants employed in response to a request to "share a book." Qualitative methodology was selected because it is appropriate for studying social interactions and yielding descriptive data on the questions that guided this inquiry. Episodes of book sharing, captured on audio-videotape, were the primary source of data. Insight into the problem being studied was gained via analysis of the participants' behavioral expressions. Procedures used to accomplish the descriptive analysis of book sharing in this sample of 13 mother-infant dyads were adapted from Spradley's (1980) paradigm of qualitative inquiry.

The Significance of the Study

The present study contributes to the small body of research on reading to children under the age of 2 years. This inquiry yields information toward understanding the social dynamics of joint book reading with prelinguistic infants who were born prematurely and sick. The effectiveness of professionals may be limited by the lack of relevant information for advising how to effectively involve this population of babies in book sharing. This study provides a source of contextually based data needed to sharpen the awareness and skills of individuals who work with preterm infants and their parents.

In view of the limited information available on joint story book reading in the preterm population, Goldberg's (1978) remarks summarize the significance of this investigation for parents:

There are . . . countless books and articles in the popular press which purport to give advice to parents on the rearing of full-term infants. Statements about what to expect and look for in the development of full-term-infants can be made with great certainty. . . . Similar statements about preterm infants must be made with more reservations and qualifications because our data base is far more limited. Parents of preterm infants, like parents of full-term infants, need information that can provide a basis for forming realistic expectations for their children and themselves. (p. 143)

Definition of Terms

The following terminology is defined as applied in the present study.

Preterm infants are babies who were born before 37 weeks completed intrauterine fetal growth and weighing less than 2,500 grams at birth.

High risk preterm infants are babies who were preterm and suffered perinatal or postnatal complications. Generally, these infants are born earlier,

weigh less, spend more time in the hospital than healthy preterm infants, and are considered high-risk for subsequent social, intellectual, and motor delays.

Chronological age (CA) is the infant's age calculated from the date of birth.

Adjusted gestational age (AGA) is the infant's age, calculated from date of birth, minus the period of prematurity (e.g., an infant who is chronologically 3 months old but 4 weeks premature, will have an AGA of 2 months).

Neonatal intensive care unit (NICU) is a specialized hospital unit specifically designed to provide a full range of health services to newborn infants in need of intensive medical care.

Clinician refers to a professional—including school psychologist, early childhood education and child development specialist, speech pathologist, and physical therapist—who administers developmental evaluations and/or makes recommendations for the management of preterm infants in neonatal follow-up.

Research site refers to the neonatal developmental follow-up unit that was the location of the setting in which mother-infant book sharing took place.

Book sharing setting refers to the living-room/play area, within the research site where the book sharing episodes took place.

Book sharing episode refers to the period of time beginning subsequent to the request that a mother "share a book" with her infant. An episode ended when the mother ceased to negotiate interactions with her infant around the book. Momentary interruptions for caregiving did not constitute the end of an episode.

Book sharing refers to the verbal and nonverbal expressions and actions that a mother and infant engaged subsequent to the request that a mother "share

a book" with her infant. Behaviors that were unrelated to interacting with the book (e.g., caregiving functions) were not considered a part of book sharing.

Entrainment in book sharing refers to the mother getting her infant locked into on-going sequences of mutually reciprocated exchanges, giving the appearance of a conversation where both participants seem to alternately initiate and reciprocate ideas or tasks that are related to the book.

Task-related refers to a complementary exchange of behavior that gives the appearance of agreeing on an idea or mutually reciprocating a task that is related to the book.

Nontask-related refers to a contrasting exchange of behavior in the sense that it does not give the appearance of agreeing on an idea or mutually reciprocating a task that is related to the book.

Limitations of the Study

Findings from this study are based on audio-video-taped episodes of book sharing that took place in a clinical setting and might not typify mother-infant book sharing in all settings. The study participants were selected on the basis of the infants' premature status and availability for observation. Infants in this study were born prematurely and sick; mothers' average income was between \$4,000 to \$8,000 annually. Book sharing in these dyads might not reflect a universal experience. The findings might apply only to the study participants and similar mother-infant populations, because of the unique characteristics that exist among these dyads.

Books shared by these parents were provided by the clinic. They consisted of a variety of readily available grocery story books. They did not represent the best literature available for infants. These mothers' responses to the particular books may not be representative of their responses to all literature for infants.

CHAPTER II REVIEW OF THE LITERATURE

Introduction

Two areas of literature were examined in this review. First, the literature on mother-infant interaction was reviewed to develop an understanding of the nature of social behavior within the preterm dyad and to provide a background to understanding the rationale for this investigation in a preterm sample. Second, descriptive studies of mothers reading with children up to 24 months were surveyed to assess what is known about the experience with a prelinguistic child. Finally, from the synthesis of the literature, implications for the present investigation are discussed.

Interaction Patterns of Preterm Mother-Infant dyads

Social interactions between preterm infants and their mothers have been described as "less optimal" (Friedman, Jacobs, & Werthmann, 1982) and "disturbed" (Field, 1977), particularly if the child suffered perinatal complications. In their explanations of how the sequelae of premature birth affect mother-infant social relations, researchers proffer differing notions of the significant dimensions of interactions, the processes by which interactions influence later development, and the contributions of the infant to interactions (Beckwith & Cohen, 1989). Typical explanations for the patterns of disorganization have focused on

examining how (a) the practice of postpartum separation and (b) characteristics of the preterm infant's appearance and temperament adversely affect maternal bonding and infant attachment behaviors, thereby hindering the establishment of affective behaviors that lead to optimal social relations.

Postpartum Separation and Mother-Infant Attachment

Attachment is significant to the quality of the infant's life. The establishment of the mother's affectionate tie to her baby (bonding) sets the stage for the infant's emotional tie to her (attachment), locking them together to ensure an enduring relationship (Klaus & Kennell, 1976, 1982) that provides the child emotional shelter, security, and information. Attached dyads will interact often and try to maintain proximity to each other (Bowlby, 1969). Behaviors such as stroking, cuddling, kissing, getting into the en-face position (mother's head aligned so that her eyes fully meet those of her infant), and vocalizing to the baby have been used to measure the degree of mothers' attachment to their baby. Secure attachment tends to occur when mothers are responsive to their baby's cues during the first few months and throughout the first year of the child's life (Ainsworth, Blehar, Waters, & Wall, 1978). Infants begin to form an attachment when they can discriminate mother from the rest of the world, which occurs at 5 or 6 months (Ainsworth, 1973). Mothers begin to form the emotional bond at their baby's birth.

Behaviors that draw mother and baby together at birth and elicit caretaking are the precursors and the first stage in the development of attachment (Ainsworth, 1973). At the birth of their child, parents will often display engrossment--an intense fascination with and strong desire to touch, hold, and

caress their newborn (Greenberg & Morris, 1974; Peterson, Mehl, & Liederman, 1979). However, when born prematurely and sick, the newborn is whisked from the delivery room and placed in a heated isolette (a plexiglass enclosure) to maintain body temperature and guard against infections. The first acquaintance of mother and child might find the newborn covered with monitoring devices and specialized equipment (Harris, 1993). Their initial contact through the small portholes of the isolette does not permit the mother to cuddle and show love toward her baby in the usual way (Shaffer, 1993).

Studies on the effects of postpartum separation reflect concern for the role that social interaction plays in the child's subsequent development. Recognizing atypical mothering behaviors in preterm dyads, Kennell, Trause, and Klaus (1975) claimed that the first 6 to 12 hours after birth are a "sensitive period" during which the mother quickly forms a bond with her infant. They advanced the premise that immediate separation and the physical barriers of an isolette obstruct the optimal course to emotional attachment; consequently, maladaptive mothering behaviors in the preterm dyad could be explained as the failure to establish emotional relations that enhance the child's development. The main idea was that the quality of the infant's socialization rests within the framework of mother-infant interaction.

Testing the separation hypothesis was the catalyst for comparing interactions in full and preterm mother-infant dyads to determine how delayed contact influenced the mother's behavior toward her infant. Klaus, Kennell, Plumb, and Zuehlke (1970) compared first contact behaviors of full-term mothers (early contact group) with preterm mothers (late contact group). The sample

consisted of low-socioeconomic status (SES) black mothers and infants of mixed birth order. On their first three visits to the nursery, preterm mothers touched their infants less and spent less time positioned en face. Similar results were reported in other studies. Leifer, Leiderman, Barnett, and Williams (1972) compared full and preterm mothers' affective behaviors in a sample of predominantly white, middle-class mothers with infants of mixed birth order. At 1 month, preterm mothers made less ventral contact with their infants, smiled less, and displayed less affectionate touching. In a follow-up of the sample at 11 and 15 months, Leiderman and Seashore (1975) found that preterm mothers continued to smile and touch their infants less than full-term mothers.

Eye contact or gaze coupling is one of the first steps in establishing interactions that enhance the child's socialization. Klaus and Kennell (1976) revealed a correlation between the amount of time mothers spent looking at their babies at 1 month and the infants' IQ at 42 months; mean IQ scores were 99 for full term and 85 for preterm. Barnard (1975) observed that mothers who looked more at their infant during the hospital period and early months of the child's life tended to respond more appropriately to their infant's cues than mothers who looked less at their infants. Researchers explained that interaction forms the basis of communication (Honig, 1982). Face-to-face contact (en face position) during caregiver-infant contact increases the chances for social interaction and provides the foundation for the development of the infant's communicative skills (Field, 1977; Gleason, 1987). Bromwich (1981) noted that interaction is the channel through which mother and baby communicate; the child is motivated to develop language as the communications steadily increase in complexity and

sophistication. However, when bonding and attachment have not been satisfactorily established, the subsequent social behaviors might not lead to the kind of communicative system that will enhance the infant's development.

The Effects of Infant Temperament on Rhythm and Reciprocity in Mother-infant Interaction

Separation studies primarily underscored the mothers' behaviors toward her baby as the precipitating event in their interaction. A second research interest was launched in recognition of the infant as a social organism capable of affecting and being affected by his or her social environment (Bell, 1974). From this posture, the infant's contribution to his or her own development was viewed in conjunction with the mother's behavior. Ingrained in this literature is the theory that the quality of interaction between mother and baby is influenced by the infant's physiological state (Korner, 1979) which dictates the child's temperament (e.g., quality of attentiveness, responsiveness, irritability, and ease of consoling). In turn, the infant's temperament influences the quality of rhythm and reciprocity in the mother-infant dyad. Rhythm and reciprocity refer to synchronized interaction in which both partners take turns responding to each other's leads (Shaffer, 1993). The baby gives behavioral cues to the mother who reads them and responds with signals that the infant gradually learns to read. The baby receives social stimulation from the mother's prompt and appropriate response to his or her signals. Consistent and expectable patterns of exchange provide the framework for the baby's first experiences in cognitive and social development (Scholmerich, Leyendecker, & Keller, 1995). Hence, maternal sensitivity to the baby's characteristics is central to fostering the quality of synchronized rhythm

and reciprocity necessary for the child's optimal development (Brazelton, 1978, Brazelton & Cramer, 1990).

The development of a self-regulatory capacity requires an early experience with a regulating primary caregiver (Schor, 1994). Through the evolutionary process, the healthy neonate is genetically endowed to evoke and reciprocate social stimuli that might lead to a regulating caregiver. However, immature physiological systems and biological insults associated with prematurity may undermine evolution to the extent that the baby is hindered from eliciting or reciprocating social responses. Consequently, mothers of babies who were born prematurely and sick often take home a poorly organized partner (Schwartz, Horowitz, & Mitchell, 1985) whose behaviors could annoy and alienate social companions (Als, Lester, & Brazelton, 1979). Infants born prematurely and sick are frequently inattentive, unresponsive, and chronically irritable (Goldberg, 1978), which adversely influences the reciprocal nature of social interactions (Charlesworth, 1992). Whereas term babies tend to take the lead and dominate the interaction, mothers of preterm babies often find it difficult to follow their child because they cannot figure out what the child will do next (Lester, Hoffman, & Brazelton, 1985). If the child cannot get into rhythm with the mother or if the mother is unresponsive, the baby may withdraw and stop trying.

Evidence suggests that the infant's temperament is central to rhythm and reciprocity in the mother-infant dyad. To illustrate, Field (1979) reported interactions in a sample of white, middle-class preterm dyads. The infants received depressed scores on the Brazelton Neonatal Behavioral Assessment Scales (NBAS), indicating that they were relatively unresponsive and thus at high

risk for interaction disturbances. Dyads were videotaped in four situations: (a) during feeding, (b) spontaneous face-to-face interactions, (c) attention getting--mother trying to keep the infant looking at her, and (d) imitation--the mother imitated her infant's behavior. Maternal behaviors were coded for talking, smiling, poking, caretaking, and game playing (e.g., pat-a cake). Infant behaviors were gaze aversion, vocalizing, fussing or crying, cycling, and squirming.

During feeding, spontaneous play, and attention getting, the infants were described as unresponsive, fussy, and gaze averting. Their mothers were described as overly stimulating and controlling. The effect of the mothers' behavior was counterproductive (i.e., excessive attempts to engage a relatively unresponsive infant in the activity elicited more inattentiveness from the infant). Field concluded that the infant's depressed activity evoked the mother's excessive activity, which in turn elicited more of the same unresponsiveness from the infant. The mother's hyperactivity may have overloaded her infant's information processing system, thus requiring the child to take frequent pauses (gaze averting) to assimilate the information. During imitation, when the mother used her infant's rhythm to moderate her own activity, the interaction was more synchronized. Perhaps imitation reduced stimulation; consequently, the child needed to pause less from the interaction. On measures of affective behaviors, mothers displayed fewer happy expressions and were more talkative. The infants continued to avert gaze; they cried often, and required a number of game trials before laughing. Field (1983) pointed out that infrequent game playing may have

been related to the mother's inability to elicit and sustain positive affect from her infant, suggesting the bidirectional nature of mother-infant behavior.

Evidence that the child's temperament influences social interactions has been corroborated in diverse situations and samples using the NBAS as the measure of the infant's behavioral profile. DiVitto and Goldberg (1979) studied a white middle-class sample at 4 months and found that mothers with sick infants (depressed NBAS) held their baby at a farther distance and touched and talked to their infant less. Similarly, in a sample of low SES, mostly Hispanic dyads, Fox and Feiring (1985) found that at 3 months infants who were healthy neonates were more alert, less irritable, and looked longer at their mothers during play than did sick infants. Mothers used less proximal stimulation with more alert infants.

Longitudinal and follow-up studies of previously discussed samples in this literature provided evidence that atypical behaviors in the preterm dyad persisted into the second year. In a 2-year follow-up, Field (1979) compared 4-month interactions of her sample (Field, 1977) with the child's language at 24 months and found that early interaction styles persisted and they related to the child's subsequent language skills. Samples of language for infant and mother were taken in a clinical setting while the dyad engaged in free play with toys. Mothers who were less imitative at 4 months used more imperatives in conversation with their infant at 2 years. Infants who were less attentive at 4 months and whose mothers were less imitative had shorter lengths of utterances and less developed vocabularies, their mother's attentiveness to pauses at 4 months related to the infant's larger mean length of utterance at 2 years.

The trend is that as preterm babies mature, mother-infant interactions become more appropriate and they resemble their term counterparts. However, the frequently reported discrepancies, observed when compared with term dyads, do not altogether fade as preterm infants mature. This tendency was observed by Brown and Bakeman (1980) who followed a sample of term and preterm black, low SES dyads through the first year. At 3 months, infants who had the lowest NBAS scores were most difficult to stimulate. Consistent with other reports, preterm mothers were described as hyperactive while their infants were hypoactive. During feeding, preterm mothers issued more directives and commands, thumped, poked, pinched, and rocked their infants more; in return, their babies rewarded them with less response. Although qualitative differences remained between term and preterm dyads at 12 months, they were not significant. The authors concluded that the quality of mother-infant interaction is influenced by the infant's behavior as well as the mother's adaptation to her child's behavioral profile. As mothers adapted to their infant's characteristics they were able to establish a style of interacting that was appropriate for the child.

In addition to the persistence of qualitative differences, researchers also found that the preterms' direction toward mature behavior is not an orderly progression. That is, the quality of preterm mother-infant behavior progresses and regresses. This discontinuous pattern was noted by Barchfield, Goldberg, and Soloman (1980) in their follow-up of the DiVitto and Goldberg (1979) sample. Infants who were born prematurely and sick had the longest hospital stay, the most depressed NBAS, were the least responsive, and the most difficult during

floor play with toys at 8 and 12 months. Their mothers' activity peaked dramatically at 8 months, giving their child more attention. However, at 12 months term and preterm dyads were similar. The authors pointed out that when infant maturity was held constant for term and preterm dyads, qualitative differences continued to appear, especially in infant affective expression and parent activity level. Therefore, it appeared that the differences could not be explained as a developmental lag in the preterm group; rather, it was likely that the development of social interaction in preterm dyads followed a different course than term groups.

A similar explanation of the preterm's course of development was proffered by Barnard, Bee, and Hammond (1984) who compared diverse SES groups of term and preterm dyads on teaching interactions at 4, 8, and 12 months. The activities were selected from the Bayley Scales of Infant Development and consisted of one age appropriate (easy task) and one task several months in advance of the child's age (hard task). At 4 months the hyperactive mother and hypoactive infant were observed in preterm dyads. Across time, preterm mothers steadily increased on facilitation measures (e.g., sensitivity, selections of materials) on both hard and easy tasks, term mothers' facilitation scores increased on hard tasks only. Observing that the variations between term and preterm behaviors did not altogether fade at 12 months, the researchers explained that perhaps differences in the dyads were not as dramatic at 12 months because the preterm infants had caught up in their level of participation. Although preterm babies matured and resembled term infants, it appeared that

preterm mother-infant dyads passed through a different developmental course in their progression toward synchronous interactions

Crawford (1982) compared full and preterm dyads at home during daily routines at 6, 8, 10, and 14 months. Preterm babies vocalized less, were more fretful, and played significantly less, their mothers spent more time holding them and engaged in caretaking, until 14 months. Discussing the tendency of preterm dyads to improve in their social interactions yet remain qualitatively different from term dyads, Crawford (1982) pointed out that a single infant or maternal characteristic could not account for the tendency of preterm dyads to resemble their term counterparts. Rather, changes may be attributable to both the infant's development, as well as changes in caretaking. As preterm mothers developed appropriate styles for coping with their infant's developmental level, the child became more responsive, consequently, a more synchronous pattern of interaction was established.

Summary

In summary, the investigative responses to Klaus and Kennell's (1976) theory of postpartum separation were seminal to our current knowledge of the sequelae of prematurity and mother-infant social relations. It is now widely accepted that preterm mother-infant interaction is a domain in which distinct patterns, suggesting disturbance, are frequently observed (Seifer, Clark, & Sameroff, 1991), particularly when the infants were born sick. However, it should be acknowledged that Klaus and Kennell's (1976) claim that failure to make contact during the first 6-12 hours (sensitive period) causes irreparable harm to the mother-infant emotional bond is questionable. In their review of studies on

the effects of delayed contact, Goldberg (1983) and Myers (1984) indicated that while early contact is pleasurable for the mother and may have some short-term effects, the long term effects are very small. The contemporary view acknowledges that parents who have an opportunity to spend time with their newborn become highly involved with their baby if they are permitted to touch, hold, cuddle, and play with their baby during the first few hours; however, irreparable damage is not set into motion as the result of delayed contact (Goldberg, 1983; Palkovitz, 1985).

Credence once given the linear model of developmental outcome was attenuated by the failure of researchers to unequivocally support the notion that a single factor, such as postpartum separation or the infant's temperament, is sufficient to explain the prominence of the passive infant and overly stimulating mother in preterm interactions. Alternatively, the "transactional" (Sameroff & Chandler, 1975) or bio-social model is now widely accepted in recognition that the infant's outcome is mediated by the interchange of factors related to biological constitution (e.g., immature neurological systems that affect temperament), as well as characteristics of the social environment (e.g., practices for medical management and the quality of interactions in the child's caregiving environment).

Implicit in the literature is that preterm mother-infant interactions need to be respected as a unique relationship. Longitudinal follow-up studies indicated that as the preterm baby matured, mother-infant interactions became more appropriate and they resembled their term counterparts; however, the qualitative differences did not altogether disappear. Additionally, in preterm dyads the

progression toward reciprocally synchronized interactions was discontinuous (i.e., the dyads progressed and regressed in their advancement toward synchronized relations). In view of the discontinuous trend, Goldberg (1983) proposed that an alternative to characterizing preterm mother-infant relations as stressed (Goldberg, 1978), disturbed (Field, 1979), or less optimal (Friedman, Jacobs, & Werthmann, 1982) is to view the relationship as a unique style that represents an appropriate adaptation to the special needs of the preterm infant. According to Gardner and Karmel (1983), this catching up trend indicated that the tendency for preterms to resemble term dyads cannot be explained simply as the result of the infant maturing, thus becoming more like his or her term counterpart. Rather, premature birth and illness are such that once they occur, the course and duration of subsequent development are reorganized and redirected. Consequently, preterm mother-infant dyads follow a different course in their advancement to synchronous interactions. On this basis, Gardner and Karmel (1983) concluded that "preterm infants are not just immature full-term infants to be studied as such. Direct comparisons between preterms at term age and full-term neonates may not be completely justified" (p. 70), suggesting that preterm dyads need to be studied as a unique population.

Finally, in accord with the transactional model of infant development, the idea that a good relationship between mother and baby can prevent or ameliorate the effects of early birth is widely supported. Consequently, the contemporary focus of infancy researchers is on exploring techniques for enhancing parents' sensitivity to their infants (Field, 1993). The objective is to attenuate social interactive dimensions that have a debilitating effect on the child's outcome.

Toward this end, strategies are designed to help mothers establish a caregiving environment that is supportive of the child's bio-social characteristics. For example, a growing trend is that hospitals provide intervention as soon as infants are identified as high risk for developmental delays (Bricker, 1986). Although postpartum separation is often unavoidable when babies are born prematurely and sick, hospital management includes early touching and cuddling contact to improve mother-infant relations (Shaffer, 1993). Additionally, interaction coaching programs to improve communicative strategies (Haney & Klein, 1993), teaching infant massage, and demonstrating the NBAS for parents (Field, 1993) are strategies employed to remediate disorganized social interaction that is a frequently encountered obstacle to the preterm infant's psycho-social outcome (Seifer, Clark, & Sameroff, 1991).

Joint Book Reading in the Mother-infant Dyad

The few studies on reading to infants (children less than 24 months) provide data on the language format and social organization of the activity. These descriptions provide a background for understanding how mothers carry out the experience with their prelinguistic infant.

Ninio and Bruner (1978) examined book reading interactions between a mother and son when the child was between 8 to 18 months. The white, British, middle-class dyad was video recorded in their home during 12 sessions that occurred within routine play; no special instructions were given. Observation of reading interactions were described as a "structured interactional sequence that has the texture of a dialogue. . . . Joint book reading by mother and child very early and very strongly conforms to the turn-taking structure of

conversation" (p. 6). Typically, interaction was characterized by a standard format of dialogue cycles in which the mother customarily used adult language, without distinction in wording or intonation between earlier and later sessions. Four types of utterances accounted for virtually all of her speech during the reading cycle; they were attentional vocative, query, labeling, and feedback utterance.

Through the process of "scaffolding dialogue," the adult supplied linguistic forms of what she believed her son intended to express, thus establishing the child's "turn" in the reading dialogue, illustrated by an example from a session when the child was 13 months:

Mother: Look! (ATTENTIONAL VOCATIVE)

Child: (Touches picture)

M: What are those? (QUERY)

C: (Vocalizes and smiles)

M: Yes, they are rabbits. (FEEDBACK AND LABEL)

C: (Vocalizes, smiles and looks up at mother)

M: (Laughs) Yes, rabbit (FEEDBACK AND LABEL) (p. 6)

The child's ability to participate increased with age and his mother escalated her performance demands by changing her expectations of the child. The researchers suggested that the mother's modification of her theory about the child's development might explain the escalation. Based on her knowledge of his past exposure to objects, events, and words he previously understood and the forms of expressions he had achieved, she coaxed the child to "substitute, first, a vocalization for a non-vocal signal and later a well-formed word or word

approximation for a babbled vocalization, using appropriate turns in the labeling routine to make her demands" (pp. 11-12). The investigators concluded that this pattern of book reading behavior was more central than other formats observed during play to teaching language. Apparently, dialogue preceded the emergence of labeling; consequently, the ritualized exchanges around a picture book, rather than imitation, was the mechanism through which the child mastered rules that govern reciprocal dialogue and thereafter mastered standard use of lexical labels.

Ninio (1980) described the dynamics of vocabulary acquisition in the context of joint picture-book reading. Participants were 20 middle and 20 low SES, Israeli mother-infant dyads. Each dyad was audio taped once in their home when the children were between 17 and 22 months. The analysis of interaction focused on the ways mothers elicited or provided labeling information. Mothers were asked to elicit from their child "all the words he knows which are shown in the book" (p. 592). The productive, imitative, and comprehension vocabularies were obtained and measured by the number of different words the children produced, imitated, or pointed to.

The mothers displayed interactive cycles consisting of label eliciting, gesture eliciting, and maternal labeling. Each cycle represented three dyadic styles. The first format elicited the child's production of labels. Initiated by mothers' "what" questions,

new information is provided in the form of feedback utterances . . . used with active infants who frequently emit behavioral response, which then might be shaped by the mother in the manner of operant conditioning. (p. 589)

The second format elicited gestures. Initiated by "where" questions, the format

represents an interaction style in which the mother preempts most of the talking and the infant is required merely to indicate comprehension by pointing . . . Feedback tends not to include a label. The label has already been uttered by the mother in her "Where is X ?" question, and because the infant tends not to provide a verbal behavior which requires semantic or phonetic modification. (p. 589)

A third format, maternal labeling only, primarily focused on giving rather than eliciting information from the child

The style consists of the tendency to open cycles by a maternal labeling statement and of the mothers' emitting many labeling utterances in general . . . the mother's way of coping with an essentially incompetent non participatory infant. (p. 589)

The high- and low-SES dyads differed in the format of their interactions.

High-SES mothers tended to employ a particular eliciting style, depending on their child's vocabulary size and the benefit the mother believed the child would get from the interaction. In contrast, low-SES mothers did not increase "eliciting style" behaviors with the child's age. Infant groups did not differ in terms of their readiness to initiate or participate in book reading and emission of labels in cycles. However, low-SES infants had a smaller productive vocabulary on all three measures. Maternal behaviors clustered in the label-eliciting format, indicating that low-SES mothers did not adjust their behavior in response to their infants. Ninio indicated that

low-SES mothers might be thought of as adequate teachers of vocabulary for their infants' present level of development, but their teaching style is not future oriented, not sensitive to changes in the infant's needs and capabilities, and therefore probably inadequate for the enhancing of rapid progression to more complex levels of language use. (p. 589)

Wheeler (1983) focused on mothers' speech as children age. Ten middle-class dyads were videotaped twice while looking at a picture book

Mothers were asked to look at the book as they normally would. At the first taping the children were between the ages of 17 and 22 months. They were in the one word stage of language development, uttering recognizable words, three children had begun putting words together. At the second taping, the children were 29 to 34 months; all were speaking in short telegraphic sentences (e.g., "Girl fall down"). The functional content of mother's speech differed significantly from the first to the second session. Mothers mostly described pictures to the younger children; a year later, they asked for more information. Mothers first talked about single major elements of pictures (e.g., "That's a wagon"); a year later they spoke of more than one element in a single sentence (e.g., "The boy is pulling the wagon"). The differences in a mothers' speech were determined to be related to the child's development. Wheeler indicated that changes in a mother's speech provided models of book reading that were "fine tuned" to the child's own verbal abilities, which exposed the child to age appropriate models of speech in a particular context.

DeLoache (1984) reported findings from two studies of the memory demands that mothers made of their children while looking at picture books. The focus was on the questions mothers asked. The participants were all white middle-class dyads. In the first study, 30 mothers and their 12-, 15-, and 18-month-old children "read" a simple ABC book of one picture for each letter in the alphabet. In a second study, 15 pairs of 18- to 38-month-old children and their mothers talked about a farm scene in a children's book.

The frequency and type of questions asked by mothers appeared to be determined by the mother's perception of the child's ability. With the youngest

children (12 months), mothers tended to be the only active participant and made almost no demands; her primary role was pointing to and labeling pictures.

M (12): Look at the apple. Apple
 " Teddy bear
 " And Kitty. (p. 88)

The activity was often formatted as questioning; however, mothers assumed the roles of both questioner and respondent. They seemed not to expect a verbal response from the child; instead, they modeled what the child was incapable of producing.

M (12): And that's a kite
 " Is that a kite, Josh ?
 " Isn't that a froggie? (p. 88)

Mothers often asked for information then shortly thereafter proceeded to answer their own questions.

M(12): That's a doggie
 " What does a doggie say?
 " Arf, arf arf, arf.

M (15): Do you know what that is?
 " Elephant. (p. 89)

Beginning around 15 months, children were expected to assume a more active role in reading. Mothers' demands for recall and recognition increased in frequency and complexity. The children were increasingly expected to retrieve the labels for objects from memory.

M (15): What's this?
 C: Bah.
 M: Ball.
 M (18): You know what this is?
 C: Kite.
 M: A Kite. Yeah. (p. 89)

Mothers reduced demands or gave clues if their child was not forthcoming with a response.

M (13): What do bees make?

C: BEE, bee, bee, bee, bee

M: What do bees make?

M: What does Winnie the Pooh eat?

C: Honey.

M: Yeah. Look at these beehives where the honey is made by the bee. (p. 90)

Another technique used to assist children was to relate something in a picture to the child's experience.

M (12): Frog. You have a frog, a stuffed one.

M(15): Look at the little mouse.

" Just like the one daddy works with. (p. 91)

Mothers often skipped pictures that were unfamiliar to their children. The decision to omit a picture, label a picture themselves, or ask their children to label seemed to have been based on the mothers' belief about their children's knowledge. DeLoache (1984) concluded that the particular techniques employed by mothers in the process of joint picture book reading, "are primarily dictated by the necessity of communicating with a limited partner, a partner who is not capable of playing a fully complementary role in dialogue" (p. 94).

Penfold and Bacharach (1988) investigated the effects of experimentally manipulated illustrations on the types of comments made by mothers to their prelinguistic children during book reading to infants between 10 and 14 months. The study sample consisted of 12 middle-class, high school educated mothers and their intellectually and physically healthy babies. The dyads were videotaped reading two books, one minimally illustrated and one highly illustrated. The frequencies of different types of illustrations were recorded and

analyzed for the proportion of comment types as a function of the degree of illustration and reading session. The researchers found that illustrations promoted parental talk and the degree of illustration influenced the amount and types of comments mothers made to their children. Mothers made twice as many comments to their children when reading highly illustrated books. The increase in illustrations also increased the overall frequency of comments made by mothers, and the frequency of *wh*-questions. Children vocalized more and mothers pointed more when reading highly illustrated books. The authors concluded that the more highly illustrated books promoted parent-child interactions; and therefore, may be preferred over minimally illustrated books.

Lamme and Packer (1986) focused on infants' verbal and nonverbal behaviors in response to their mothers' book reading. Thirteen mother-infant dyads were videotaped reading four books. Infants ranged in age from 3 to 8 months at the beginning of the study and 7 to 12 months at the conclusion. Nineteen different types of infant behaviors were identified and categorized into visual, tactile, verbal, and affective domains. The authors combined the behaviors in the four categories into a profile of infant reading behaviors, indicating gradual transitions in book reading behaviors as the infant matures.

Visual Behaviors

At 3 months the babies merely stared at the book sometimes focusing on a picture; however, there did not appear to be a connection between the infant's gaze and the mother's speech. At 5 months infants followed their mother's pointing cues or the mother matched language to what her child looked at. After

9 months infants looked at the picture which corresponded with the adult's speech.

Tactile Behaviors

At 3 months infants aimlessly touched the book while randomly moving their arms; they began scratching the pages of the book at 4 months; by 6 months scratching was combined with patting, rubbing, hitting, and grabbing at the pages. Patting and grabbing behavior meshed into page turning by 8 months; older infants sometimes became absorbed in just turning pages, rather than looking at the contents of the book. By 12 months, infants whose mothers pointed frequently during book reading pointed themselves, and the adult responded by naming the picture.

Verbal Behaviors

Babies were generally silent for the first 6 months unless protesting the continuation of book reading. Entering 6 months babies responded verbally with giggles or chuckles as reactions to anticipating or predicting what would happen next in a familiar book. At 12 months infant behaviors were louder and more pronounced. Some infants cooed as their mothers read or they reacted verbally to rituals such as the mother making animal sounds. By 15 months some babies supplied words in familiar stories or responded, "Dat?" to request the mother to label.

Affective Behaviors

Affect stood out in all age levels. The youngest babies were more relaxed and contented while their mothers snuggled and read to them. At 3 months infants initiated affective behaviors by holding on to their mother's finger; at 5

months by gently stroking or patting her arm; by 6 months infants were able to turn around and look at their mothers during story reading; and by 12 months infants hugged their mothers at the finish and begged for another story to be read.

Resnick et al. (1987) observed mothers reading to prematurely born infants in 116 dyads at 6 ($n=49$), 12 ($n=42$), and 24 months ($n=25$). The racially mixed participants were videotaped in a clinical setting. Mothers were asked to "share" a book with their children. The researchers did not describe the social dynamics between mother and infant; rather, they focused on identifying specific maternal book sharing behaviors.

From their observations of mother-infant reading, 56 maternal book sharing behaviors were cataloged. Seven of the 56 behaviors were considered negative, inasmuch as they were not regarded as favorably contributing to the experience:

- Pinches, pulls, or pushes child
- Restricts child's movements
- Resists child turning pages
- Interrupts her reading to play with a toy
- Becomes absorbed by book and ignores child
- Reprimands child
- Comments negatively about child's participation (p. 892)

The quality of maternal book reading behaviors was assessed by subtracting the number of negative behaviors from the mother's cumulative score. Mothers of 12-month-old infants had higher scores than mothers in the 6-month-old group; however, the difference was not significant. Mothers of 24-month-old infants scored significantly higher than the 6-month-old and 12-month-old groups. Four behaviors were observed in more than 75% of the dyads: (a) inspects the face of the child, (b) points to picture, (c) labels picture, and (d) begins reading from front

of book. Mothers in the 24-month-old dyads displayed more than twice as many of the high frequency behaviors compared to the 6-month-old dyads, suggesting that the mothers became more involved with their infants as the children aged. The researchers concluded that reading to an infant involves a "complex constellation of behaviors" (p. 893).

Implications from the Survey of Literature

The few studies on joint reading in the mother-infant dyad have focused on the language format of mother-infant reading (Ninio & Bruner, 1978), the mother's speech as it relates to the infant's age (Wheeler, 1983), the contribution of the activity to the child's vocabulary development (Ninio, 1980), the mother's memory demands of the child (DeLoache, 1984), and the mother's language as a function of the illustrations (Penfold & Bacharach, 1988). One study has focused specifically on infants' reactions to being read to at various ages (Lamme & Packer, 1986), and one has specifically targeted a range of maternal behaviors, as well as included children who were born prematurely and sick (Resnick et al., 1987). In view of the small number of studies, the scattered focus of inquiry, and the small samples that have been studied, our knowledge about book sharing in the population at large and in diverse populations remains limited.

Patterns of language around the book have been described as synchronized (DeLoache, 1984; Ninio, 1980; Ninio & Bruner, 1978) and conforming to the turn taking structure of conversation (Ninio, 1980). However, in the youngest dyads (3 months) the infants' activity was described as a less organized pattern that persisted until about 6 months (Lamme & Packer, 1986) and in preterm dyads the mother's behavior was described as a "complex

constellation" including positive and negative behaviors (Resnick et al., 1987). Findings of variations in the mothers' and infants' interactive styles indicate that inquiries concentrating on the impact of specific interactive qualities are needed in order to draw inferences about the most accommodative practices for particular mother-infant characteristics.

A common thread in joint reading was that the mother adjusted her requests for the infant's language based on her perception of the child's ability to take a verbal or nonverbal role, indicating that the mother's language format may be explained as a function of her infant's ability to participate (DeLoache, 1984; Ninio, 1980; Ninio & Bruner, 1978; Wheeler, 1983). Usually, when infants were not able to take a verbal role, their mother employed the process of scaffolding dialogue. She provided words that the child could not produce, as if the infant intended to express her imputations. This behavior was not typical of low SES mothers in the one study that compared high- and low-SES mothers (Ninio, 1980). Regardless of their infants' ability and readiness to participate, low-SES mothers tended not to adjust their behavior to accommodate their children's ability. The inference is that sociocultural factors as well as the infant's developmental characteristics influence the nature of book sharing. On this basis, in consideration of the difficulties described in mother-infant relations when infants were born prematurely and sick (e.g., Barchfield, Goldberg, & Solomon, 1980; Barnard, Bee, & Hammond, 1984; Brown & Bakeman, 1980; Crawford, 1982; DiVitto & Goldberg, 1979; Field, 1977, 1979, 1983; Fox & Feiring, 1985; Schwartz, Horowitz, & Mitchell, 1985), there is reason to assume that book sharing in the preterm population may not reflect the same experience described

in episodes of reading with healthy babies. Consequently, there is a need to describe the activity in the preterm infant dyad.

Being born prematurely and sick is a threat to the quality of reciprocal interactions that normally ensure the child's optimal development (Als, et al., 1979; Bromwich, 1981; Klaus & Kennell, 1976; Shaffer, 1993). However, a negative outcome is not predestined. The positive outcome for these babies is predicated upon a caregiving environment that is consistent with their bio-social characteristics, which may not be the same as the healthy term infant. Gardner and Karmel (1983) pointed out that the preterm mother-infant unit is not simply an immature model of a full-term counterpart; it follows a different course in physical and social development. Identifying strategies to help mothers establish interactive styles that support their babies' needs is central to the prematurely born infant's subsequent development (Haney & Klein, 1993; Seifer, Clark, & Sameroff, 1991). Toward this end, the descriptive data from this study serve as a foundation for developing an understanding of "how" parents can effectively share a book with infants who were born prematurely and sick.

CHAPTER III THE RESEARCH MODEL AND PROCEDURES

Introduction

The procedures for data collection and analysis using qualitative methodology are described in this chapter. The section begins with a summary of the inquiry process as it relates to the research objective and the theoretical perspective underlying the methodology. In the final section, the procedures and instruments used for data collection and analysis are described.

The research objective was to describe the social dynamics of book sharing in a sample of preterm infant-mother dyads. This task called for an investigative approach that is appropriate for studying social interaction as it unfolds. Qualitative methodology was selected because the fundamental act of inquiry is description (Van Maanen, 1983). Qualitative research methods refer to an array of procedures that produce descriptive data—people's spoken words and observable behavior (Bogdan & Taylor, 1975) as the source of well grounded, rich descriptions, and explanations of processes occurring in local contexts (Miles & Huberman, 1984). Qualitative inquiry, as described by Wilcox (1982), is an in-depth observational, descriptive, contextual, and open-ended approach to research. The researcher's mode is noninterventional and nonmanipulative (Rogers, 1984); the task is to produce an in-depth portrait of the phenomenon as it takes place

In general, qualitative data are "symbolic, contextually embedded, cryptic, and reflexive" (Van Maanen, 1983, p. 10), standing ready through production and analysis to yield meaningful interpretation. Data may be collected in a variety of ways such as observation, interviews, excerpts from documents, or audio-visual-recordings and are usually processed through dictation, typing-up, editing, or transcription, yielding extended text upon completion (Miles & Huberman, 1984). The following features of qualitative inquiry, identified by Bogdan and Biklen (1982), apply in this study.

1. The researcher is the key instrument
2. The setting is the direct source of data
3. The focus is on process rather than product
4. Data are descriptive
5. Data are analyzed inductively

In summary, the research objective called for a flexible methodology that is noninterventional, nonmanipulative, and yielding contextually embedded descriptions of the social dynamics between mothers and their infants during the book sharing experience. Qualitative methods match these requirements.

Research Perspective

Procedures for studying the social dynamics of book sharing were grounded in the theoretical framework of symbolic interactionism, which posits that individuals construct and acknowledge their understanding of social situations as they interact (Blumer, 1969; Prus, 1996; Reynolds, 1990). As a social construct, book sharing from the interactionists' perspective is not an inherent repertoire of skills that are innately produced and practiced. Rather, the nature of the activity

is grounded in the human-lived-experience, the participants' communicative conduct and content are essential (Denzin, 1992) to identifying the experience

Three assumptions of this study of mother-infant book sharing were embodied in tenets of social interactionism. First, the observable expressions of talk and conduct reflect the schema that participants employ to produce and manage the interaction. Therefore, the analysis of the nature of book sharing focused primarily on the mothers' verbal and nonverbal expressions and actions because she was credited with initiating and mediating the activity with her prelinguistic child. The infant was not dismissed as a passive participant; rather, in keeping with theoretical assumptions, the child was viewed as both affecting and being affected by the demands of the dyad (Bell, 1974). Second, context matters; the participants' expressions and actions cannot be interpreted independently of the situations in which they occurred (Heritage, 1984). Entering the setting through episodes of book sharing that were captured on audio-videotape preserved the context of the mother-infant interactions, thereby making it possible to generate a contextually based description of the social dynamics that characterized the activity. Finally, the focus is on process rather than product. Hence, the book sharing setting was approached as a practical social-interactive phenomenon; the nature of the experience was studied through examining features of interaction--verbal and nonverbal expressions and actions--employed by the participants to carry out the request, "Would you please share a book with your child?"

The following attributes of interaction were essential to revealing the character of the experience:

1. Verbal behavior:

- The manifest content of language and verbal utterance
- Extralinguistic behavior, consisting of expressive and noncontent vocal qualifiers, such as tempo of speaking, tone, and pitch of voice.

2. Nonverbal behavior:

- Body actions such as posture, motor gestures, facial expressions, eye contact, and tactile behavior.
- Spatial behavior such as participants' attempts to structure the area and participants' physical movement to establish proximity to each other or to objects.

Attributes identified in the literature as influencing and/or reflecting the nature of mother-infant relations were considered. These included tactile qualities (e.g., stroking, cuddling/caressing, kissing), visual qualities (e.g., eye coupling, gazing, en face alignment, gaze averting), affective qualities (e.g., smiling, fretting, crying, squirming, fussing), vocal qualities (e.g. crying, laughing), and qualities of behavioral sequences (e.g., pausing, leading, following).

The Research Model

Description of the Research Site

Mother-infant book sharing took place in the living room/play area of a developmental follow-up unit that served the evaluation component for a regional perinatal intensive care center. It primarily functioned to monitor the long-term consequences for infants who were born prematurely and/or seriously ill and high-risk for developmental delays.

Follow-up personnel in this center included a team of professionals and professionals-in-training from the following areas: counseling psychology, developmental psychology, early childhood education, special education, speech therapy, physical therapy, pediatric nursing, and pediatric medicine. The staff provided an interdisciplinary multiphasic approach to assess the long-term development of each child's medical, and developmental status. Follow-up also included a family-focused approach to prevention and intervention for developmental delay in premature and low-birth-weight infants.

As a part of the evaluation process, infants and their mothers were routinely videotaped during 5 minutes of free-play. Free-play served to relax the dyads and acclimate them to the surroundings prior to beginning the formal evaluation. Audio-videotaped segments of social interaction were used as a part of the interdisciplinary evaluation. Book sharing was added to the videotaped segment as a means of observing interactions between infants and their primary caregiver in a situation considered to be primarily language dependent.

Mother-infant Dyads: Selection Criteria

Participant selection for this study was based on the following criteria: (a) the infant must have been prematurely born (less than 37 weeks gestational by medical reports) and/or weighed less than 2,500 grams at birth, (b) no infants who manifested obvious congenital abnormalities or serious physical handicaps were included, (c) at the time of videotaping the infant was 6 months adjusted gestational age (AGA), (d) the videotaped episode must have been at least the second taping for the dyad, (e) the infant was videotaped with his or her primary maternal caregiver, and (f) both mother and infant were audible and visible. In

consideration of the difficulties in preterm mother-infant relations reported in the literature, it was expected that at 6 months (AGA) the dyads would be more adapted in their interaction styles than at the 3-month taping.

There were 30 available book sharing episodes for the 6-month evaluation group. Of these tapes, approximately 13 met the selection criteria for the present study. Reasons for exclusion were (a) the infant was accompanied by someone other than his or her maternal caregiver ($n=3$), (b) individuals were present during the book sharing episode other than the mother and her infant ($n=1$), (c) the episode was distorted due to mechanical difficulties ($n=1$), (d) the infant did not meet the criteria for prematurity ($n=12$). Although the taped segment was their second, some infants were not presented as scheduled or re-scheduling was not within the actual 6-month (AGA) range. To adjust for this factor, I included infants who were closest to 6 months (AGA)--not less than 7 days, not more than 15 days.

The Study Participants

The participant dyads in this study consisted of 5 male and 8 female infants and their mothers. The infants were born prematurely and sick, were high-risk for developmental delays, and were Neonatal Intensive Care Unit (NICU) graduates being monitored through a developmental evaluation follow-up program.

The dyads included 7 black and 6 white infants ranging in age from 5 months 23 days to 6 months 15 days ($M = 6$ months AGA); birth weights ranged from 1,318 to 2,420 grams ($M = 1,848$); gestational age ranged from 30 to 37 weeks ($M = 33$). The range of NICU confinement was 3 to 45 days ($M = 17$). The infants were all single deliveries. The infants' 1 and 5 minute Apgar scores

respectively ranged from 5-10 ($M = 7$) and 7-10 ($M = 9$). The participant mothers, at the date of taping, consisted of 6 single, 5 married, and 2 divorced mothers. They were 18 to 36 years of age ($M = 25$); levels of education completed ranged from 11th grade to 2 years of college ($M = 12$ th grade); and family income averaged between \$4,000 to \$8,000 annually (Table 1).

All mothers in this study signed consent and release forms granting permission for videotapes and other illustrations of their children's evaluation. They also consented to the use of these materials for research to further understand concerns related to high-risk infants and their families.

Gaining Entry to the Site

Entry into the setting was facilitated through the program director. Subsequent to discussions, permission was granted for me to conduct this study in the clinical site, with access to appropriate data. Research is a usual activity within the clinic; therefore, the clinical staff did not express apprehension upon learning of this study. I assured the staff that the project would not be an intrusion into clinical activities.

Description of the Book Sharing Setting

Episodes of mother-infant book sharing were audio-videotaped in the semi-naturalistic setting of a living-room/play area. The setting was arranged to insure that mother and infant were as comfortable as possible. The living-room/play area was well lighted and well ventilated. The floor was covered with carpet and pictures were attractively arranged on the walls. Furnishings included the following: a 6' x 4' foam mat placed center floor, a basket containing age appropriate toys and several children's picture books, a sofa, a cushioned

Table 1. Demographics for Infants and Mothers by Dyads

Infants						Mothers			
Dyad	Race/Sex	GA (Wks)	BW (g)	Apgars (1.5 min)	Hosp. (days)	AGA (mo/days)	Marital Status	Age	Educ. (years)
1	W/F	30	1520	5.7	16	6.07	D	27	12
2	B/F	33	1860	8.9	14	6.12	S	25	12
3	B/F	37	1900	9.9	12	6.01	M	30	12
4	W/M	35	2220	5.9	8	6.08	S	21	12
5	B/F	34	2250	7.8	8	5.25	S	18	11
6	W/M	30	1360	7.9	45	5.25	M	36	13
7	W/M	34	1960	10.1	19	6.14	S	21	12
8	B/F	35	2420	5.8	10	5.23	D	27	12
9	W/F	32	1350	4.7	26	6.15	M	30	14
10	B/M	33	2000	8.9	10	6.15	S	21	12
11	B/F	37	2040	8.9	3	6.06	S	24	12
12	B/M	35	1820	8.8	13	6.07	S	24	12
13	W/F	30	1318	7.9	31	6.00	M	22	12
	M=	33	1848	7.9	17	6.00	M=	25	12

arm chair a child-size table with infant seat attached, and two child-size chairs. The video-camera-recorder was located in plain view, approximately 7 to 8 feet from the mother-infant dyad (Figure 1).

Data Collection

The source of primary data was the setting of book sharing, captured on audio-videotape recordings. The principal means for data collection and analysis were (a) the researcher as principal instrument for observation, analysis, and interpretation of data; (b) audio-videotaped recordings of mother-infant book sharing, used to document a comprehensive record of the event; (c) unobtrusive measures, as a means of capturing naturally occurring interactions; and (d) my notebook, used to compile transcripts and observation notes on book sharing episodes.

Researcher as Principal Instrument for Observation

This descriptive study of book sharing required me, as the principal instrument for observation, analysis, and interpretation of data to unobtrusively collect and analyze data as both a moderate and nonparticipant observer (Spradley, 1980). I entered the research site as a moderate participant observer for the following purposes: (a) to collect data necessary to select the study participants, (b) to document descriptions of the research site and the book sharing setting, and (c) to assess and document the nature of obtrusiveness. The data for the study were derived from audio-video episodes. Thus, I entered the setting of book sharing as a nonparticipant observer for purposes of collecting and analyzing data that led to the descriptive analysis of the event.

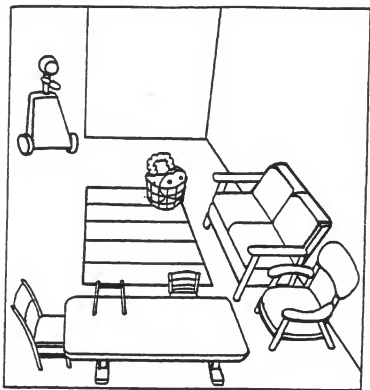


Figure 1. The Setting for Book Sharing

Videotaping: Procedures and Instructions

As a part of the infant's evaluation, the participants were routinely videotaped during approximately 5 minutes of mother-infant free-play. Upon entering the setting, each mother was encouraged to settle herself with her infant on the mat in preparation for the free-play segment. When the dyad was prepared, the recording equipment was engaged and the clinician left the room. The clinician returned in approximately 5 minutes to request, "Will you please share a book with your child? You may select one from the basket." The clinician then left and returned approximately 5 minutes later to continue with the evaluation process.

The term book sharing was used because of its neutral connotation. Requesting mothers to "read a book" to their infant might specify an expected behavior and it might not be appropriate in instances where mothers selected wordless picture books. Share a book, then, was considered a relatively unstructured request, enabling mothers to frame the activity within their own judgment.

Unobtrusive Measures

Unobtrusive measures refer to procedures that reduced the possibility of manipulative events that might "change the world being examined" (Schwartz & Jacobs, 1979, p. 75). The collection of data from clinical files, as well as my entry into the book sharing setting through audio-videotaped episodes, served to reduce the participants' and clinical staff's reactivity to my presence at the scene of interactions and context of events being investigated (Denzin, 1978; Schwartz & Jacobs, 1979). Additionally, the possibility that the act of book sharing might

be altered indirectly through the participants' or clinical staff's reaction to knowledge of the study was probably minimal because research was a common activity in the clinical site.

The possibility of distortions in participants' behavior due to stress associated with visiting the clinical site and participants' anxiety associated with the video equipment within plain view were primary concerns. These issues were assessed through observations of typical routines during clinic visits and through informal discussions with clinical staff. I concluded that because the episodes under study were taken during at least their second visit to the clinic, mothers' anxiety was eased by their familiarity with the setting as well as with the videotaping procedures. Mothers and infants were also familiar with the staff member who conducted the videotaping, as he was a person who routinely operated the recording equipment. In general, clinical relations were pleasant and developed as the result of the staff's position that the evaluation process relied heavily upon providing a nonthreatening environment. Therefore, conscientious efforts were made to reduce anxiety producing conditions and to establish a relationship of trust between participants and staff.

The following scenario from my notes attests to the successful development of positive relationships. It is a capsule of informants' comments and my observations over a 3-week period in the clinic. The description details one of the mother-infant dyad's visit to the setting; it represents the usual experience from arrival at the center through completion of videotaping.

Upon arrival mother and infant were greeted by the receptionist who escorted them into the clerk's office where they were "checked-in." As

mother and clerk engaged in conversation, information for the child's record was requested and recorded by the clerk.

Following the check-in process, the mother and infant were accompanied to the living-room/play area by a clinical evaluator who coordinated the remaining activities during the visit.

After entering the living room/play setting, mother and clinician talked informally as the mother placed her child on the mat and placed a toy in front of him. Observing the infant trying to touch the toy, the clinician commented, "He's doing a nice job. [His] motor development is coming along. . . . I can see that you are really working with him."

The mother responded with a smile. Continuing in an informal conversational mode, the clinician encouraged the mother to make her infant and herself comfortable for the formal evaluation routine. At the 6-month evaluation, mothers were aware of the videotaping; thus, in the following conversation the mother seemed to be familiar with the reference to "starting the camera." The clinician continued, "Would you like to get him ready and make yourself comfortable here on the mat? I'll come back in a few minutes and start the camera." [The clinician then left the room].

The mother responded to this suggestion by removing the infant's shoes and a sweater; she took a pacifier and small towel from what appeared to be a baby bag or a large purse. Accompanied by the staff member who routinely managed the video-recorder, the clinician returned and requested the free-play activity, "Will you play with him for a few minutes so that he can relax before we begin [the evaluation] and we can get some tape on the two of you together?"

You may use any of the toys in the basket. Greg will begin the tape and come back in a few minutes." Greg then focused the recorder. Mother and infant were left to their experience. Approximately 5 minutes later, the clinician returned, stepped into the doorway and asked, "Would you please share a book with your child? You may select one from the basket." The clinician left, returning in approximately 5 minutes to continue the evaluation process.

Positive comments, according to the clinicians, were a means to establish trust and reduce anxiety in the clinical setting. As one clinician explained,

These are honest remarks, and they indicate to the moms that we have an interest in them as clients and families. . . . Some of their children have had a rocky course and it helps mom to cope if she realizes that her child is making progress and that she has a support system at the clinic.

Another clinician stated that she always tried to begin the evaluation with "small talk. . . . I mean nonthreatening conversation." A third explained,

Sometimes what you must report to them [mothers] is not pleasant, so you want to seize every opportunity for encouragement. Some mothers are apprehensive about the clinical procedures. . . . It's important to get them to relax, to trust themselves and trust you [the clinician], in order to get the best evaluation. If the mother is uncomfortable, her behavior may be different; the infant could sense his mother's frustration and become irritable. Then what you get may not be an accurate picture of the infant's performance or the caregiving relationship.

Through informal discussions with clinicians and observations of clinical activities, it became apparent that, in general, participants and clinicians established rapport and that mothers were at ease in the setting. These factors, coupled with the lack of directives and manipulation of the book sharing experience, maintained a level of unobtrusiveness necessary to gather a realistic picture of mother-infant book sharing.

The Researcher's Notebook

The researcher's notebook was used to bind written data including participants' demographic data and verbatim transcripts of each episode. It also held accounts of pre-analysis activities with demo tapes. As book sharing was examined, anecdotal notes on individual episodes; speculations, questions, conceptions, and misconceptions related to conjectures and findings were also entered in the notebook. These contents were helpful in building the conceptual framework and formulating questions that served to focus the inquiry process.

Analysis of Data

The procedures used to accomplish the descriptive analysis of mother-infant book sharing were adapted from Spradley's (1980) Developmental

Research Sequence model (DRS). The cyclic nature of the process is both descriptive and analytic and therefore compatible with the objectives and questions that powered this investigation. I began with one broad question that guided the inquiry. The process of finding patterns and determining how they related led to more specific questions that served to focus the inquiry. The holistic picture of book sharing emerged through the analytic process of the DRS.

Transcription of Data

Following the collection of the raw data on audio-videotape, each of the episodes of book sharing was transcribed into a running record. This written protocol was a detailed narrative of the sequential event. It reflected the mothers' and the infants' verbal and nonverbal. Notations of mothers' and infants' posture, gestures, facial expressions, spatial proximity, and vocal qualifiers (pitch, tone, and rate of speaking) were included. The running narrative was recorded in column form (left of the page) leaving the right half of the page open to enter written comments (Appendix A).

Conclusion Drawing

The primary task in conclusion drawing was systematically searching the data to "determine parts, the relationship among parts, and their relationship to the whole" (Spradley, 1980; p. 85). Bogdan and Biklen (1982) summarized the process as "working with data, organizing it, breaking it into manageable units, synthesizing it, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others" (p. 145). The DRS consisted of four interwoven phases or cycles of analysis: (a) domain analysis,

(b) taxonomic analysis, (c) componential analysis, and (c) theme analysis.

Domain analysis involved searching the protocols for "cultural domains" by examining the written protocols with specific questions in mind. Spradley (1980) suggested asking the following kinds of questions to reveal categories of meaning: Are there "kinds of" things? Kinds of reasons for things? Kinds of characteristics of things? Kinds of uses for things and ways to do things? In this study, kinds of verbal behavior and kinds of nonverbal behavior represented the two broad initial domains. These domains were filled in with subsets--behaviors that related to the broad cultural domain. For example,

Kinds of verbal behavior:

- statements
- questions
- comments
- laughing

Kinds of nonverbal behavior:

- smiling
- touching
- looking
- pausing

Taxonomic analysis expanded the cultural domains by dividing the subsets. The taxonomies included attributes that were all related to a broad domain. For example, kinds of verbal behavior was expanded by the inclusions:

Kinds of statements

- affirmation
- labeling
- directive
- reprimand

From the domain kinds of nonverbal behavior the subset "pointing" was expanded by the following inclusions:

Pointing is a way to X (e.g., X= indicate)

- where to look
- where C is already looking
- where M is looking
- the object of talk

As the data were analyzed, the contents of domains and taxonomies were constantly reworked. Some were expanded, others were discarded through integrating the contents.

Componential analysis was the systematic search for attributes that would tie the domains and taxonomies together. For example, the search for regularly associated interactive patterns such as sequences of behaviors and functions of behaviors occurring around a particular time tied the components of domains and taxonomies together, revealing how the behavioral contents were organized into a book sharing format.

Theme analysis, the final level, was the search across domains, taxonomies, and components for themes in the recurrent attributes. Theme analysis focused the data in terms of the semantic content of interactive sequences; i.e., statements about: X, taking place during a particular sequence of interactive behavior. For example,

Statements about:

- handling the book
- pictures
- the child's behavior toward the book

This final level of analysis revealed the cultural theme, that accompanied the social dynamics, through which these 13 mothers projected their understanding of "... please share a book with your child "

Validity Measures

Validity has to do with "how one's findings match reality" (Merriam, 1988, p. 166). Some of the measures taken to ensure the validity of the reported findings from this study have been described in the nonintervention,

nonmanipulative research model. Specifically, the unobtrusive nature of data collection through videotaped episodes, my role as a nonparticipant observer, and the taping of episodes during the normal routine of the participants' visit to the clinical setting, reduced the chances of "altering the world being examined" (Schwartz & Jacobs, 1979, p. 75).

The credibility of findings was challenged throughout the analysis process. For example, as hypotheses emerged, they were vigorously challenged through searching anecdotal notes and the contents of domains and taxonomies for sets of comparative and contrasting evidence that would either support or discredit the idea. Thus, findings were held tentative, absent an exhaustive search for corroborating evidence. The process of challenging credibility, through locating examples and nonexamples across episodes, also served to support the conclusions that the evidence represented either patterns in the sample, contradictions to an established pattern or incidents that could be considered idiosyncratic or indicative of a subsample.

Finally, as an independent measure of concurrence, the data were categorized using The Reading Observation Instrument developed by Resnick et al. (1987) to identify a range of maternal behaviors in preterm mother-infant reading dyads. Two graduate students, who were trained to use the Reading Observation Instrument, coded each of the 13 episodes. Dividing the total number of agreements by the number of agreements plus disagreements provided the finding that coder agreement was above 90%. Considering behaviors identified in the DRS analysis with those identified using the Resnick

instrument served as a second lens through which to weigh the evidence that supported this descriptive analysis of book sharing.

Chapter Summary

The objective of this research was to document a descriptive analysis of the social dynamics of book sharing in the preterm infant-mother dyad. Book sharing was conceived as a social interactive literacy event that can be descriptively defined through analyzing the social dynamics employed by participants to construct and acknowledge their understanding of the experience with their 6-month-old baby. From this perspective, the focus of this inquiry was on the interactive process. The behaviors of interest were the participants' verbal and nonverbal expressions and actions, employed to carry out the request, "Would you please share a book with your child?" A qualitative research method was selected because the fundamental focus of this approach is description and because it is appropriate for the objective and questions that guided this inquiry.

CHAPTER IV THE PORTRAYAL OF "WOULD YOU PLEASE SHARE A BOOK?"

Introduction

The purpose of this study was to describe the nature of book sharing in the mother-infant dyad. The major focus of this inquiry was on the verbal and nonverbal expressions through which mothers interpreted the request "Would you please share a book with your child?" The inquiry was powered by one broad question: What features characterized the social dynamics observed in book sharing episodes of 13 mothers and their 6-month-old infants who were born prematurely and sick? This chapter is a descriptive analysis of the social dynamics through which these mother-infant dyads carried out the event.

The Book Sharing Format

"What behaviors did a sample of 13 mothers of preterm infants employ in response to the request 'Would you please share a book with your child?'"

The goal for this inquiry was to discern the character of the social dynamics that comprised "book sharing." In accord with the theoretical framework, symbolic interactionism, the meaning of behavior derives from social functioning, making it possible to discern the nature of book sharing through the moment-to-moment events taking place between the mothers and their infants. Hence, the interpretation of a discrete behavior is entwined in the unity of the total episode, is situation dependent, and derives its communicative value as the

rhythms, patterns, and cycles of social interactions unfold. Brazelton, Koslowski, and Main (1974) explained this condition of meaning in context:

The behavior of any one member becomes a part of a cluster of behaviors which interact with a cluster of behaviors from the other member of the dyad. No single behavior can be separated from the cluster for analysis without losing its meaning in the sequence. The effect of clustering and of sequencing takes over in assessing the value of particular behaviors, and in the same way the dyadic nature of interactions supersedes the importance of an individual member's clusters and sequences. (pp. 55-56)

The mothers responded to the request to "share a book" by chaining a stream of discrete verbal and nonverbal behaviors. In view of the relationship between context and meaning, it was not unusual that a single behavior or gestural sequence carried multiple meanings (Jakobson, 1960; Lewis & Lee-Painter, 1974). Consequently, the actual meaning of a behavior can hardly be interpreted without regard to the whole course of interaction. For example, the behavior looking into the child's face was not always assigned the same meaning, as demonstrated in the as following excerpts.

1. Looking into the child's face was a way to determine where the baby was looking:

- 4.1 M: See the pup pup? (Adjusts the book in front of C)
 See the pup pup now?
 C: Looking into the book.
 M: (Looks into C's face, follows C's line of gaze to the book)
 I bet I know which one you're looking at. (Crooning, looks from C to the book two times)
 I bet I know which one you're looking at. (Quickly glances from C's face to the book, then back to C)
 See? (As if meaning, I ESTIMATED CORRECTLY, DIDN'T I?)

2. In the following excerpts, pausing and looking into the child's face was a way that the mother indicated her baby's turn.

- 4.2 M: Wanna see that? (Looking into C's face with her head bent down to C's eye level)
See, huh? (Pause, holding the book directly in front of C)
- 4.3 M: Turns the page)
C: (Looking into the book)
M: Ah, see the donkey? [Statement, with a questioning inflection] (Pause, looks into C's face as if waiting for C's response).
C: (Continues to look into the book)
- 4.4 M: What's this, a lamb?
A lamb, huh?
Is that what it is? (Pause, looking into C's face, as if waiting for C to respond]

This point of meaning in context may be readily realized when the structure and character of the social dynamics of book sharing are revealed. Therefore, in the interest of clarity, the issue of the mothers' behavioral repertoire is revisited and elaborated in the subsequent section, *Pathways to Literacy*.

The second and third questions that guided this inquiry were: How did a sample of 13 mothers of preterm infants format their behaviors to carry out book sharing with their preterm infant and what features characterized the verbal and nonverbal expressions and conduct employed by a sample of 13 mothers to carry out book sharing with their preterm infant? The responses to these questions revealed the structural organization and the character of the social dynamics through which each mother mediated book sharing with her infant.

The social dynamics of book sharing was characterized by the mothers' efforts to strike a balance between the physical and social environments that would support the roles each mother envisioned for herself and her infant. Throughout this interactive framework, organizing and negotiating were central

themes. Specifically, the mother's portrayal of book sharing was highlighted by her efforts (a) to prepare a context for book sharing (i.e., setting the stage by organizing the physical environment), (b) to motivate the baby to engage mutual interchanges around the book (i.e., incorporating the baby in book sharing by organizing the child's spontaneous behavioral repertoire into the dyadic roles that the mother considered appropriate for interacting with a book as a literacy artifact), and (c) to negotiate the give and take of interacting with a less competent partner (i.e., maintaining an appetitive social atmosphere that sustained the infant's participation in book sharing).

When mothers responded to the request, a book sharing format emerged around three sequential activities: (a) organizing the setting, (b) entraining in book sharing and, finally, (c) closing book sharing. The interactions within these sequences were characterized by the mothers' efforts to engage and maintain a flow of mutual interchanges that mirrored their understanding of "share a book."

The descriptions that follow reveal the character of the social dynamics that comprised the three activity formats. As the format is described, examples from the protocol are provided to illustrate the findings.

Phase I: Organizing the Setting for Book Sharing

Organizing the setting featured the mothers creating a physical environment for book sharing. Each dyad was seated on a cushioned mat engaged in play with one or more toys. The clinician entered and made the request, "Will you please share a book with your child?" Although at liberty to move to a cushioned chair or couch, all of the mothers remained on the mat. However, it appeared that they considered book sharing to require a particular

arrangement that was different from play; thus, mothers prepared a setting that was appropriate for book sharing to take place.

The book sharing episode opened with the mothers organizing their surroundings; they first arranged the physical environment. Within an average of 5 seconds after the clinician's request, most of the mothers prepared a space on the mat. They began by clearing toys from the area immediately surrounding the dyad. Five of the mothers cleared the mat of toys and also removed the toys from their infants' grasps.

Without breaking their flow of behavior, the mothers proceeded to arrange the dyad into a book sharing posture. Their objective seemed to be to establish close proximity to each other. Five different postures were observed when the mothers initiated interactions with their infant around the book. Seven of the mothers were adjacent to their infants (the neighbors posture) and three mothers were seated with their babies sandwiched between their legs (the sandwich posture). The remaining three mothers each assumed a unique position: one mother positioned the baby on her lap (the lapsit posture) one mother sat face-to-face opposite the baby (the en face posture), and one sat coupled behind her baby (the caboose posture). These five postures are depicted in the following descriptions.

The neighbors posture. The mother positioned the dyad so that she was beside her infant, both partners facing the same direction. One form of the neighbors posture featured both partners seated up-right looking into the book. The mother placed the book on the mat or held it in front of the child and she leaned, with both hands extended in front of the child, to manipulate the book (Figure 1). A second form of the neighbors posture featured the mother kneeling

(supported on both knees) and the infant either lying stomach down on the mat or sitting upright beside the mother. In the kneeling posture, the mother manipulated the book on the mat in front of her baby.

The sandwich posture. Seated on the mat, the mother nestled her infant between her thighs (upper legs). Both partners sat upright facing the same direction with the infant's back against the mother's upper torso. Complete body contact was made as the mother enveloped the infant's body within the embrace of her arms. She manipulated the book with both hands in front of the dyad (Figure 2).

The lap-sit posture. Seated on the mat, the mother sat the infant on one or both of her thighs (upper legs). Both partners sat upright, facing the same direction, and with the infant's back against the mother's upper torso. Complete body contact was made as the mother enveloped the child's body with her arms. She manipulated the book with both hands in front of the dyad (Figure 3).

The en face posture. The mother seated her infant, in an upright posture, across from her in a face-to-face position. The book was placed between the partners and open in front of the child (which was upside down for the mother). The mother leaned forward to view the book and she used both hands to manipulate the book (Figure 4).

The caboose posture. Both mother and infant were seated upright facing the same direction. The infant's back was to the mother who was seated directly behind the baby. The dyad appeared coupled together, in the fashion of cable cars. The book was placed open in front of the child. The mother leaned around the child's shoulder to view the book and she extended her arm around her baby so that she could manipulate the book (Figure 5).



Figure 1.
The Neighbors Posture



Figure 3
The Lap-sit Posture



Figure 2.
The Sandwich Posture



Figure 4.
The En Face Posture



Figure 5.
The Caboose Posture

Demos (1982) indicated that the mothers' spatial arrangements provide some idea of their conception of the situation. When mothers establish close proximity with their baby right from the start, they perceive the activity as a joint venture. Conversely, when the mother is nearby with the baby beyond her arm's reach, she considers the venture a child activity. On this basis, organizing the setting might be explained as the mothers' intention to set the stage in accordance with the expectation that book sharing would evolve as a joint experience that required close proximity to the infant.

On the basis of the comments that mothers made while organizing the setting, two additional factors were taken into consideration. First, they did not consider book sharing to be the same as playing with a toy, and they wanted their child to know that the experience would be different and that toys had no place in the activity that was about to take place. One mother indicated this when her child reached for a toy that she had just removed; "Gotta leave them rings (toys) alone O.K. Leave them rings alone just for a minute." Second, it appeared that the mothers anticipated that toys would be a distraction to the infant; hence, clearing the immediate area coupled with removing toys from the infant's grasp was a measure to set the stage for the child's attentive participation. As one mother moved the toy she stated, "Oh, we should not show you that; [put] that away," as if she intended, IF YOU SEE THE TOYS, YOU WON'T BE INTERESTED IN THE BOOK. In what seemed to be an intuitive maneuver, several mothers covered the toy with the book as if to shield the child's view as she removed the potential distractor. Thus, it was apparent that

the mothers were trying to avoid competing for their children's interest by removing potential distractions.

The mothers arranged physical proximity with their infant so that both could comfortably interact around the book. It seemed that they intended to organize a *dyadic posture* (i.e., a position that would facilitate the baby's participation as well as their own). For example checking and adjusting the baby's position, as if reassuring that the child's legs were properly placed, and comments to the child such as "You all set?" and "There you go" indicated that comfort was an important factor in their choice of postures. Thus, arranging posture was a way to get comfortable for interacting together around the book.

Phase II: Entraining the Infant in Book Sharing

Entraining the dyad in book sharing featured the mothers and infants negotiating the rules for the turn taking model of dialogue that the mothers attempted to establish with their babies. If successful through this repetitive process, the mother and infant would become entrained in an exchange of reciprocal turns that gave the appearance of a conversation. The entraining process included three sequential levels of activity.

1. Soliciting the infant's participation in book sharing was the initiating phase. It featured the mother introducing her baby to the activity and getting the child to visually focus on the book, followed by setting expectations for their respective mother-infant roles in the book sharing process.

2. Engaging the infant in book sharing was a negotiating phase. It featured the mother's efforts to establish shared visual attention (coorientation) toward the book and thereafter bring the infant's behavior into accord with her

expectations to engage mutual exchanges of point/say and look/listen around the book.

3. Entraining the dyad in book sharing was the proto-conversational phase. It featured the mother and infant locking into an organized ritual of reciprocal turns that gave the appearance of a conversation where both partners alternately initiated and reciprocated ideas and tasks that referenced the book.

Level I: Soliciting the infant's participation

The prelude to book sharing was getting the infant interested in the book as an object. The activity opened with the mother soliciting the baby's visual orientation to the book. Visual gaze (looking) indicates the readiness and intention to engage in interaction (Collis, 1977; Goffman 1963). The main indication of the infant's localized interest is cues from head and eye movements in fixation and tracking. "From very early on the mother can best attract the infant's attention to objects by handling them" (Collis, 1977, p. 357). Thus, getting the child to visually focus on the book was not difficult because the curious babies visually tracked their mother's hand movements from the moment that she reached for the book. Thereafter, in a continuous flow of activity the mother promptly proceeded as if she intended to seize the moment of curiosity to persuade her baby to interact with her around the book.

The mother customarily maintained her baby's interest through an array of novel behaviors such as playfully smiling and looking pleasantly wide-eyed, speaking in an infantile voice or an exaggerated high pitch, expressing warmth and affection through touching such as cheek to cheek contact, speaking in moderately low tones, or whispering and cooing. The mother's display of

"infant-modified" (Stern, 1977) expressions held the baby's attention as she opened and placed the book directly in the child's line of sight.

Once the book was in place, the mother continued to capitalize on the infant's attentiveness as her opportunity to introduce the activity and set the expectation for their respective roles. The idea that the baby would look and listen and the mother would "read" and "show" the book was implicit in the introduction of the activity. In their initial utterances to the infant, the mothers used one of three modes to solicit looking and listening behaviors:

1. Without pointing, five mothers immediately requested the child to look at a picture or look and listen to her comments about a picture:

4. 5 M: (Holding the book in front of C.
Speaking in a soft, tender voice)
Look at this.
See the baby animals? (Pause, looks into C's face)
C: (Looking at the book and waving her arms)
4. 6 M: (Placing the book in front of C as she speaks)
So look.
Listen.
C: (Looking intently at the open book)
4. 7 M: (Opening the book as she speaks)
Look. (Moderate tone, slight pause)
C: (Looks and touches the book).
4. 8 M: Look at this boy. (Warm, excited tone).
C: (Touching the book, looking and wiggling legs).
4. 9 M: Look at this. (Exaggerated infantile tone/baby talk)
Look-a here.
C: (Looking).

2. Three mothers immediately pointed to and described or labeled a picture.

4. 10 M: (Holding the book in front of C)
See something red? (Pointing; glances into C's face)
C: (Looking and reaching for the book)
4. 11 M: (Placed and opened the book in front of C)
Aa-a-ah, (Mock surprise; glances quickly at C)
Bunny rabbit. (Pointing to the picture, speaking in a moderately excited tone)
C: (Looking intently at the book).
4. 12 M: (Placed and opened the book in front of C)
Here are the animals. (Pointing, speaking in an expressive tone)
C: (Looking at the book, then looks away).

3. While opening or picking the book up, four of the mothers immediately issued invitations to their infants to look at the book, and they announced their intention to read or show the book to their infants.

4. 13 M: (Speaking as she opens the book)
Want to look at a book? (Speaking in a moderately low voice; moderately excited tone)
C: (Looking, reaches and touches the book, then looks away)
- 4.14 M: (Speaking as she picks the book up)
Wanna look at the book? (Speaking in a moderately low, excited tone)
Mama read to you.
C: (Looking and reaching for the book)
- 4.15 M: (Speaking as she opens and places the book in front of C)
I'm gonna show you this book. (Speaking in a whispering, cooing tone)
C: (Looking intently at the book)
- 4.16 M: (Speaking as she approaches C with the book)
Come on, let's look in the book. (Speaking in a moderately low tone)
C: Vocalizes, as the mother approaches
(Looking and reaching for the book)

One mother did not fit either of these modes. In essence she implied the reverse of the roles that others expressed, suggesting that the baby, rather than she, would read and label. Nonetheless, her verbal expressions paralleled the general notion of others that book sharing would involve reading, looking, and labeling.

- 4.17 M: (Holding the open book in front of C)
 Can you read?
 Ki-Ki (Calling C's name in a sing-song fashion)
 (Pause, looking at C's face)
 Do you know what that is? (Looking at the book)
 C: (Looking and holding the book).

Through these modes of initiating, the mothers introduced their babies to the activity and they expressed the expectation that their babies would look and listen. As the episode progressed it became more apparent that the activity would be governed by the rule of taking turns looking, listening, showing, reading, and labeling. The infant's principal activity would be looking and listening (spectator/listener) in response to the mother showing, labeling, and reading the book (performer/speaker). Hence, their reciprocal roles would feature alternating sequences of the following nature:

Mother: performer/speaker

- 4.18 M: Look (pointing to the picture).
 A dog.
 A dog, like Frizbee.

Infant: spectator/listener

- 4.19 C: (Visually follows M's hand to the picture.
 Looks intently at the picture).

Level II: Engaging the infant in book sharing

When the baby was visually focused, the mother's next efforts progressed to engagement. Engaging the infant in book sharing featured the mother's efforts to bring the infant's behavior into accord with expectations for taking turns interacting with her around the book. Most of the mothers tried to organize the activity into a flow of reciprocal exchanges involving their infants responding to the requests to "look" and "listen." However, this quality of interaction was not easily established, especially with very active infants, largely because the children introduced an array of unsolicited behaviors. Usually, during the soliciting level a mother did not respond to her child's combined behaviors. Her initial goal seemed to be getting the child interested. She appeared to be concerned primarily with the child's visual orientation toward the book, as a signal that the baby was attending to the book and ready to interact.

Once a baby visually focused on the book, the mother's next effort was to establish "coorientation" (Collis, 1977) in which the infant expressed an interest in the book and the mother reflected a responsiveness to the baby's interest. The apparent objectives were to establish joint attention (i.e., visually focus on the same aspect of the book) and thereafter to channel the infant's behaviors into coordinated sequences of looking and listening in response to her pointing and labeling.

Organizing the dyadic behavior into a flow of coordinated exchanges was not easily accomplished because once the baby visually focused, spontaneous behaviors either accompanied or followed visual orientation. Customarily, the infant's behavioral repertoire toward the book included combinations of looking,

listening, reaching, touching, patting, grasping, pulling, and mouthing the book. Sometimes the infant introduced preverbal vocalizations and body movements such as waving arms, wiggling, and squirming. In addition, they alternated looking at the book with looking away from the book. At this point in the book sharing format, the 13 dyads diverged.

Two patterns of book sharing evolved primarily as the result of the ways mothers addressed their infant's unsolicited behavior. The alternating and sometimes simultaneous motor and language exchanges between mother and child were either task-related or nontask-related units of exchange. Task-related exchanges were comprised of gestures that gave the appearance of agreeing on an idea relating to the book and cooperating in performing actions toward the book. This quality usually emerged as the result of the mother synchronizing her response to incorporate the infant's unsolicited behavior into a dyadic script around the book.

Coorientation to the book was made as the result of the mother following her baby's direction of gaze, rather than the baby following the mother (Collis, 1977) and synchronizing with the baby ensured the mother's efforts to engage reciprocal turns. A mother who successfully engaged task related exchanges synchronized with her infant by imputing meaning to the child's spontaneous actions that complimented what she considered appropriate for interacting with a book. The mother customarily incorporated the child by reversing her script so that the baby's role became performer and speaker; in turn, the mother played out the spectator-listener role. This effect is demonstrated in excerpts 4.20-4.22.

4. 20 C: (Looking into the book, touches the page
and strokes the page aimlessly)
M (leans, inspects C's face as if to see where she is
looking)
Kitty? (pause)
Uh huh, kitty

Designating the baby as performer. The mother established that the baby was trying to reference a specific part of the text. By looking into the child's face and following her line of sight, the mother interpreted the child's use of eyes to indicate a place of interest. Additionally, the infant's random hand movements were interpreted as the intent to "show" (point to) the mother exactly where to look. In turn, assuming the role of spectator, the mother looked where the baby pointed.

Designating the baby as speaker. The mother supplied the child's voice and content of expression: "Kitty?" (pause as if waiting for C to respond). Although she provided a label, the interrogative inflection implied that the baby asked a question, perhaps meaning IS THAT A KITTY? In turn, the mother demonstrated that she was listening, ("Kitty"), perhaps meaning: DO YOU MEAN IS THAT A KITTY? Then she confirmed, ("Un, huh, kitty."), perhaps meaning: YES, THAT IS A KITTY. The gist of the sequence was that the mother followed the child's line of vision and assigned the child's ocular orientation as the child's way of pointing to the picture. She asked the child's question, then, she answered the question as if the baby had spoken. Through this means the mother established their mutual exchange.

Designating the baby as leader. Maintaining the exchange sequence usually meant yielding the lead to the baby. The effect of yielding was that the

baby was permitted to establish the topic of book sharing. This effect was demonstrated when the mother adjusted her actions to compliment the child's unsolicited actions toward the book (4 21-4 22). First, the mother attempted to introduce her topic about the dog, the child looked, but at the same time he grasped and waved the page of the book (4.21). The mother maintained the synchronous rhythm by following along as if the child stated, I WANT TO TURN THE PAGE.

- 4.21 M (Turns the page, points to a picture)
Look Jim, a dog.
See that dog? (Pause, as if waiting for a response).
C: (Grabs the corner of the page as it turns
and waves the page back and forth)
- 4.22 M (Looking into C's face, smiling)
[Do] You want to turn the page for me? [A statement
with an interrogative inflection]
C: (Waving the page back and forth)

This mother allowed her child to lead. Additionally, as the result of the mother's imputation, the child also established "page turning" as the topic of activity. In this way, the child's visual and tactile behaviors toward the book appeared to express the thoughts that his mother spoke.

In the unit (4 21) the mother attempted to lead and to introduce her topic about the dog. At the same time however, the infant grasped and waved the page of the book. In turn, the mother again yielded to the baby by coordinating her behavior with the child's activity (4 22). Consequently, she again incorporated the child's unsolicited actions into the activity sequence; thus, maintaining the flow of reciprocal exchanges

The action sequence of a mother who engaged in task related exchanges was consistent with the notion that, at first, turn taking was entirely due to the mother's initiative (Schaffer, Collis, & Parsons, 1977). The appearance of the child's intention lies only in the mother's mind; she tends to act as though the baby were a communicative partner by endowing the child's responses with a signal value, which in fact, the infant does not possess (Newson, 1977). Mothers who were able to mutually engage their infants usually did so by ascribing meaning to spontaneous behavior that would readily establish the children's participation as appropriate for the occasion. The most frequent types of synchronized responses that mothers used to engage mutual turns were (a) interpreting the children's gestures as if the babies intended to make appropriate contributions to the action sequence, (b) commenting on the children's gestures as if affirming that the children's contributions to the interaction sequence were appropriate, (c) answering the children's gestures as if the children asked questions, and (d) soliciting gestures as if acknowledging that the children were communicative partners who were entitled to equal turns in the action sequence.

In effect, by imputing the baby's intentions the each mother gave their prelinguistic partner a voice in the activity. Such responses enabled the mother to incorporate almost anything that the baby did toward the book into book sharing. As the result of the mother matching her response with the baby's unsolicited actions, the dyad acquired a cooperative and communicative nature. For example,

1. Interpreting gestures as if her child stated, I WANT TO HOLD THIS [OBJECT/PICTURE]. I AM TRYING TO GET IT OFF OF THE PAGE.

- 4 23 C: (Scratching the page)
 M: (Whispering into C's ear)
 You want to get it out, huh?

2. Commenting on gestures by evaluating the baby's performance:

- 4 24 C: (Holding and swinging the page, turns it and lets it go)
 M: You turned it. (Soft, mildly excited tone)
 You turned it all by yourself.

3. Answering gestures by responding as if her child asked the question,

WHY DOES IT [THE PAGE] SWAY BACK AND FORTH?

- 4 25 C: (Turning the page back and forth; looking
 intently at the swaying page)
 M: That's just the way books are read.

4. Soliciting gestures by encouraging the child to emit or repeat a specific gesture

- 4 26 C: (Leans forward into the book, almost touching the
 page with her face)
 M: Do you want to smell it?
 Ye-e-a-ah, you want to smell it.
 Smell it.

These types of task related exchanges gave the appearance of both partners speaking and cooperating. The infant's gestures appeared to be intentional and appropriate for the occasion, hence giving the appearance of the mother and baby alternately initiating and reciprocating turns in a conversation about the book.

In contrast to the mother-infant synchrony and the appearance of agreement that dominated task related interactions, the asynchronous pattern of nontask related book sharing was dominated by exchanges that gave the appearance of opposition. Nontask related exchanges emerged as the result of the mother's failure to adjust her responses to incorporate the child's unsolicited

behavior into interaction sequences with her. The pattern was customarily overshadowed by negative affect in the sense that the mother routinely excluded her baby from participating by interpreting the child's spontaneous conduct (other than looking and listening) as inappropriate and by making negative comments about the child's intentions. In essence, the mother failed to acknowledge the infant's actions as meeting her expectation for what would take place around the book. Such behavior was counterproductive to her efforts to engage the baby in sequences of reciprocal turns around the book. This pattern of dialogue was illustrated in the following excerpts from an episode in progress:

Initially, this mother refused to incorporate her infant's unsolicited behavior by ignoring the child.

- 4.27 C: (Reaches and grasps the book but does not
succeed in maintaining his grasp)
M: (Ignores C's grasping)
See the girl? [A statement with a questioning
inflection]
[The] girl is swinging.

As the activity progressed, her comments and imputations for the child's behavior became increasingly negative. The mother indicated her intentions for the child to look and see, as she displays the contents of the book.

- 4.28 C: (Grasping for the book)
M: (Tilting the book away from C's grasp)
Don't try to tear that book.
Look at the book.
- 4.29 C: (Continues to try to grasp the book)
M: (Leans around the book, looks into C's face with a
scolding facial expression and verbal tone)
Don't tear the book.
Trying to tear up the book.
Don't try to tear up the book.
- 4.30 M: (Turns the page)

- See the girl?
 C: (Attempted to grasp the turning page and continues to grasp for the page)
- 4 31 M: (Moving and tilting the book away from C)
 What you gonna do with the book?
 Tear it up?
 C: (Continues to grasp for the book)
 M: (Uses her arm to block C's grasp)

This interaction suggested that the mother's idea of book sharing would permit only the adult to initiate topics and direct the activity (i.e., only the mother should point and say). In turn, the infant should follow her directives to look and listen. It appeared that this mother failed to engage reciprocal exchanges because she believed that the child's actions did not compliment her perception of the child's role in book sharing. As the result of the mother's refusal to incorporate her infant's unsolicited reaching and touching behaviors, the episode was marked by exchanges that alienated the baby and, in effect, precluded engaging a pattern of task related book sharing.

The preceding excerpts portrayed examples of all-or-nothing patterns of reciprocal exchanges. However, neither pattern represented a majority of the 13 dyads. It appeared that the point-say/look-listen model served as the framework for producing book sharing; that is, most of the mothers expected that the activity would be governed by the communication rule of taking reciprocal turns doing and saying something about the book. Evaluating the participants in terms of the model of reciprocating turns as the framework for accomplishing book sharing, the dyads were either communicative, marginally communicative, or noncommunicative partners, depending on the degree of task and nontask related exchanges that dominated their interactions.

- In the four communicative dyads, an average of 90% of their exchanges (range = 79-95%) were task related.
- In the three marginally-communicative dyads, an average of 59% of their exchanges (range = 55-65%) were task related
- In the six noncommunicative dyads, an average of 29% of their exchanges (range = 0-39%) were task related.

Table 2 indicates the distribution of task and nontask related exchanges among the dyads.

Level III: Entraining the dyad in book sharing

The cornerstone of entraining was engaging the infant in reciprocal exchanges. If the dyad successfully entrained in book sharing, the interactions would mesh into an ongoing flow of task related gestures. Such gestures would model taking turns in a conversation about the book. Because the infants were prelinguistic, their principal means of "speaking" consisted primarily of body actions such as looking, smiling, reaching, and touching. Babies sometimes vocalized. However, the episodes were not rich with vocalizations. The mothers' principal means of speaking included language as well as body actions.

In order to entrain, the mother had to first channel the infant's behavioral repertoire into sequences of mutual exchanges with her. Noncommunicative dyads were characterized by a flow of nontask related exchanges that were typical of excerpts 4.27-4.31. Noncommunicative dyads were not able to engage a flow of reciprocal exchanges. Consequently, these mothers and their infants did not progress to the entraining phase; instead, the persistent discord led to closure. Communicative dyads were dominated by sequences of mutually

Table 2
Distribution of Task and Nontask Related Exchanges by Groups and Dyads

Dyads	Frequency		Percentage		Total Exchanges
N = 13	Task	Nontask	Task	Nontask	
<u>Communicative (n=4)</u>					
1	20	1	95	5	21
2	33	2	94	6	35
3	29	3	91	9	32
4	23	6	79	21	29
	m 26	3	90	10	29
<u>Marginally-Comm. (n=3)</u>					
5	22	12	65	35	34
6	9	7	56	44	16
7	12	10	55	45	22
	m 14	10	59	41	24
<u>Noncommunicative (n=6)</u>					
8	7	11	39	61	18
9	5	8	38	62	13
10	3	6	33	67	9
11	4	8	33	66	12
12	2	5	29	71	7
13	0	10	0	100	10
	m 4	9	29	71	12

Note. The numerical order corresponds with the order of dyads in Table 1.

reciprocal interactions. These partners were able to successfully entrain in dialogue around the book. Marginally-communicative dyads were initially dominated by discord that closely resembled the noncommunicative dyads. Eventually, they were able to negotiate a flow of mutual exchanges; however, they did not successfully entrain in book sharing. Communicative and marginally communicative dyads are described as they appeared during entrainment.

Communicative dyads. Typically, in the four communicative dyads where entrainment was successful, the partners engaged in mutual exchanges within the first three to four turns and subsequently meshed into an ongoing ritual-like sequence that resembled taking turns in a conversation. These mothers were able to maintain the sequence by getting their children caught-up into repetitive cycles. It appeared that repetition promoted the infants' ability to reliably contribute the actions that were expected of them in order to sustain the flow of reciprocal dialogue. Consequently, as the episode progressed, it appeared that the mothers and their infants became more proficient in their ability to appropriately respond to each other's cues. This effect was explained by Fogel (1977) who summarized that repetition sustains the infant's attention and the increased redundancy creates a more predictable environment for the sake of the infant's immature information processing capacities. The infant's repetition then becomes "an incentive to the mother to maintain her own repetitive series of acts" (p. 149). The repetitive and communicative nature of entrainment is demonstrated in the following excerpts:

M solicited and affirmed C's visual orientation toward the book:

- 4.32 M: Look at this. (Speaking in a soft tender voice)
See the baby animals?
C: (Looking at the book and waving her arms)
- 4.33 M: Look at the baby animals. (Pause)
C: (Reaching for the book)
- 4.34 C: (Touching the book with both hands)
M: Ye-e-a-ah. (Pause)
Say, "I like books."

The mother responded to the baby's looking behavior as if the child intended to indicate that a certain picture was of interest.

- 4.35 C: (Smiling)
M: (Inspects C's face, as if to determine where C is looking)
What is that? (Whispering and crooning)

The mother incorporated her child's tactile behavior into dialogue around the book, then proceeded to channel the behavior into repetitive exchanges of turning the page. It appears that the child's cue to turn the page is the mother's pause.

- 4.36 C: (Pats the page, draws the book toward herself, then looks into M's face)
M: (Looking into C's face while turning the page.
M's face is very close to C's face)
You want to turn the page?
- 4.37 C: (Holding onto the book)
M: (Holding, without closing the page)
Want to turn the page? (Pause, looking at C)
- 4.38 C: (Turns the page)
M: That's right.

As if rehearsing the script for their mutually supportive tasks, the dyad accelerated to entrainment (i.e., locking into sequences of repetitive exchanges

that gave the appearance of both partners intentionally sharing joint tasks around the book).

- 4.39 M: Ah! (Mock surprise Pointing to a picture)
Those are ducks.
Ducks.
Quack, quack! (pause).
C: (Turns the page)
- 4.40 M: Here's a puppy dog, puppy (Pointing to the picture).
We have a puppy dog (pause).
- 4.41 C: (Turns the page, looks toward M)
M: Ye-e-a-ah.
What else do we have here?
A-a-a-ah! [Mock surprise Slight pause)
Here are baby chicks
- 4.42 M: (Turns the page)
C: (Looks at the book then looks at M)

The child responded as if the mother had violated the established repetitive exchange cycle. This seemed to have interrupted the rhythm of their exchanges. Although the mother attempted to repair the violation, book sharing was destined for closure.

- 4.43 M: Do you want to turn the page again? (Said as if realizing that she had over stepped her bounds or as if C stated, YOU WERE OUT OF TURN. I'M SUPPOSE TO TURN THE PAGE.)
M: (Begins to turn another page, hesitates, looking into C's face as if trying to draw C's attention back to the task and regain the synchronized rhythm)
C: (Looking at the book trying to turn the page)
- 4.44 M: Do you want to? (Pause)
Do you want to turn the page?
C: (Smiling and looking at M, turns the page)
- 4.45 M: Yeah! (Looking at C)
That's right.
You want to turn the page.

- C: (Rocking)
Vocalizes! (Excitedly)
- 4.46 M: You want to turn the page? (pause)
Huh?
C: (Turns another page then looks into M's face)
M: Yeah, that's right.
- 4.47 M: (Points to the picture then into C's face)
Oh, this is a horse, a baby horse.
(Pointing to another picture)
And a baby calf that says, "Moo!"
C: (Has a big smile, wiggles, holding the book)
Vocalizes.
M: Ye-e-e-ah!
That's right, "Moo."
- 4.48 C: (Bangs on the floor with her hand then places the
hand back on the book and pulls it toward her mouth)
- M: So now you're going to taste it.
(Looking into C's face and speaking with an
approving tone)

The baby's banging then mouthing behaviors seemed to be erratic shifts in behavior that may have been associated with excitement or overload, and the need to take a break. However, this mother's interpretation was different. She promptly switched speakers as if the baby asked, **WHAT DOES IT TASTE LIKE?** She incorporated the idea into their dyadic script. As if the baby initiated the topic, the mother encouraged the child to emit the behavior again so that she could describe what the child demonstrated.

- 4.49 M: Taste it.
Does that taste good? (Pause; looks at C:
Looks at the book)
- 4.50 M: (Pointing to the book)
Taste good.
Did it taste Good? (Pause, looks at C)
C: Vocalizes (neutral tone)

The baby's neutral vocalization appeared to be associated with the early mouthing and banging behaviors, which seemed to signal the baby's need to withdraw; again, the mother ignores it. The mother attempted to take the lead and redirect the child's action to their page turning routine. However, the baby no longer appeared to be interested in the book.

4. 51 M: Do you want to turn another page?
 Do you want to all by yourself? (Pause; looks at C)
 C: (Leans, looking away from the book; spots a toy
 and reaches for it)

Implicit in her response was that she interpreted the baby's visual behavior as a gesture to mark the target of interest. Accordingly, when the baby looked at the toy, the mother interpreted the gesture to mean, I DON'T WANT TO READ THE BOOK ANY LONGER. I WANT THE TOY. WILL YOU GET IT FOR ME? In turn, she promptly obliged

4. 52 M: [Do] You want to see that? [Referring to the toy]
 Shall we get it? (Looking at C)
 End of episode

The exchanges between this mother and her infant meshed into a continuous flow wherein the infant reliably participated with minimum prompting from her mother. Their synchronized exchanges gave the appearance of a conversation where the mother and baby alternately reciprocated and initiated ideas and tasks that referenced the book. This pattern of interaction illustrates the quality of turn-taking that was projected by most of the mothers during the soliciting phase.

Marginally communicative dyads. Early exchanges did not indicate whether dyads would eventually accomplish reciprocal book sharing. However,

successful entrainment appeared to firmly depend upon the length of time that was spent getting the infant engaged in mutual exchanges. The three marginally-communicative dyads were able to engage mutual exchanges around the book; however, they were not able to entrain in sequences of conversational-like turns because the babies withdrew under what appeared to be fatigue from their mothers' prolonged attempts to negotiate their reciprocal roles. Typically, these mothers resorted to a trial-and-error approach before discovering how to get the dyad in rhythm. As the episode progressed the mothers were eventually able to channel their children's behaviors into task-related exchanges; nonetheless, they were not able to lock into a dyadic ritual.

This result was demonstrated in the following episode by a mother who spent a major portion of the engaging level struggling to get her baby to cooperate. It appears that through trial and error, the mother eventually decided that mutual turn-taking could be achieved if she cooperated with her infant. Subsequently, the mother coaxed her child to produce the behaviors that she initially prohibited; in turn, the mother synchronized her actions to complement the child's productions. It appears that she intuitively began to incorporate her infant by composing a dyadic script around the book and the child's behavior. Finally, the mother attempted to lock the dyad into book sharing by encouraging the infant's repetitive behavior. However, she was not successful because around this time the infant no longer expressed interest.

M solicited her child's visual orientation toward the book then she struggled to persuade the baby to cooperate with her. Their interaction was dominated by sequences of nontask-related exchanges.

- 4.53 M: Look (Opening the book)
C: (Looking at the book. Grasps the page and attempts to turn it)
- 4.54 M: (Pushes the page back)
Wait a minute.
C: (Maintains grasp, continues attempts to turn)
- 4.55 M: (Restrains C's hand with her thumb; looking at the page)
C: (Removes hand from the book)
- 4.56 M: (Places her left hand on C's abdomen and presses C's body back [C is sandwiched between M's legs])
C: (Places hand on the book)
- 4.57 M: (Removes C's hand from the book)
C: (Trying to maintain a grasp. Tips the book upward, almost closing it)
- 4.58 M: (Grasping the book with both hands)
Wait Katie.
C: (Swipes at the book)
- 4.59 M: (Left hand is on the book, right hand is on C's abdomen)
See that.
See the picture?
C: (Grasps the book)
- 4.60 M: (Struggling to keep C from grasping the book)
C: (Hand on the book)

The nontask related exchanges continued until, finally, the mother seems to have concluded that if she cooperated with her baby, the two could engage mutual exchanges around the book. Thereafter, she encouraged and incorporated her baby's behavior into the activity. Consequently, the remaining interaction was dominated by sequences of task-related exchanges

- 4.61 C: (Moves arms and hands away from the book)
M: (Takes C's right hand and places it on the page)

M began to engage C. It seemed that she intuitively composed a dyadic script around the child's interests. As the episode progressed, the interaction closely resembled the communicative dyads. The mother established reciprocal exchanges that referenced the book by affirming, assisting, and interpreting the baby's actions as appropriate toward the book.

- 4.62 C: Leans forward, as if to grasp the book)
 M: (Guides C's hand to the page, places it under the page and assists C to turn the page)
 Ye-e-a-ah. (Exaggerated "yeah")
 You turned the page.
- 4.63 C: (Leaning forward and touching the page)
 M: See that!
 See the picture?
 (Lowers her voice to a whisper)
 You wanna get that picture? (Head close to C's)

Despite the mother's affectionate bids, her child appears tired and no longer willing to participate further in the activity. On the basis of their verbal comments, the mother seems to appropriately interpret the baby's cues to stop; however, the mother does not conform.

- 4.64 C: (Looking away from the book, to her side)
 M: (Moves the book away from C)
 She's getting mad.
- 4.65 M: (Moves the book into C's line of sight)
 Look, Katie.
 C: (Leans into the book, touches the pages with both hands, then looks away from the book)
- 4.66 M: (Looking into C's face, as if determining where C is looking)
 That's right, touch it.
 C: (Looks away from M).

Mothers in the three marginally-communicative dyads resorted to this trial-and-error approach before incorporating their children in book sharing by

synchronizing with their children's spontaneous actions. As the activity progressed, the mother seemed to become a more responsive and proficient with respect to figuring out how to incorporate, synchronize, and support her infant's participation in reciprocal book sharing. Unfortunately, at the time when entrainment might have been within reach, the child seemed to be tired. Consequently, although these mothers were eventually able to engage their infant in mutual exchanges, the dyad was unable to lock into an on-going sequence of conversational-like turns. Thus, in marginally communicative dyads, as the result of prolonged negotiation of reciprocal roles, book sharing was derailed at the margin of entrainment.

Phase III: Closing Book Sharing

Closing book sharing featured the mothers and infants negotiating the conclusion of interactions around the book.

The most important rule for maintaining an interaction seemed to be that a mother develop a sensitivity to her infant's capacity for attention and his need for withdrawal—partial or complete—after a period of attention to her. (Brazelton, Koslowski, & Main, 1974, p. 59)

Cycles of looking and withdrawal are not unusual during mother-infant interaction. When infants are over aroused, they cannot tone down the volume of a voice or walk away; they look away (Adamson, 1995). The babies might look away to reduce the intensity of the interaction, to take time to recover from the excitement it engenders, and to digest what has been taken in during the interaction. Thus looking away and voluntarily returning represents a recovery phase that allows infants to self-regulate their internal state (Stern, 1974), at a time when constant stimulation, without relief, could overwhelm the baby

(Brazelton et al., 1974). Similarly, arousal may be increased by turning away from a redundant and boring stimulus to seek a new stimulus (Fantz, 1964, Kagan & Lewis, 1965).

Closing book sharing was usually initiated by the infant. Reduced intensity of the child's interaction (Stern, 1977) and prolonged gaze averting (Chance, 1962) were the infant's way to serve notice that termination of the activity around the book was forth coming. The following behaviors featured prominently as the child's way to end book sharing:

1. Averting gaze without voluntarily returning to the book.
2. Averting gaze, staring fixedly on a toy and motioning as if reaching for the toy, this sometimes also signaled that there was a competing interest.
3. Ceasing exploration or trying to explore the book (e.g., abandons reaching, touching, and holding the book).
4. Mouthing or trying to mouth the book.
5. Emitting stressful vocalizations.
6. Crawling away or pushing away from the book.
7. Squirming as if to leave the mother's lap.
8. Arching to avoid looking at a picture that is placed in his or her direct line of sight.
9. Refusing to make eye contact by turning away when the mother attempted to make eye contact.

Analogous to this interpretation of the infants' behavior as their intention to signal the closing of book sharing, Brazelton et al. (1974), identified four ways that infants indicate and cope with unpleasant or inappropriate stimuli:

1. Actively withdrawing from it—that is increasing the physical distance between the stimulus and oneself by changing one's position, for example arching, turning, shrinking.
2. Rejecting it, that is dealing with it by pushing it away with hands and feet while maintaining one's position.
3. Decreasing its power to disturb by maintaining a presently held position but decreasing sensitivity to the stimulus—looking dull, yawning, or withdrawing into a sleep state.
4. Signaling behavior, for example, fussing or crying which has the initially unplanned effect of bringing adults or other caregivers to the infant to aid him in dealing with the unpleasant stimulus. (p. 59)

Closing book sharing closely conformed to the dyadic rhythms that characterized participants' communicative competence. In the communicative dyads where the pattern of interaction was dominated by task-related exchanges, the mothers seemed to appropriately interpret their infants' withdrawal as the request to close; in turn they promptly ended the episode. In two of the dyads, at the child's first instance of prolonged averted gaze without voluntarily returning to the book, the mother promptly interpreted the behavior to mean, I'VE LOST INTEREST IN THIS BOOK. For example, the child looked away and visually scanned the room, then intently focused on a toy with an extended arm, as if reaching for it. The mother responded as if the child said, I WANT TO PLAY WITH THE TOY. I DON'T WANT TO LOOK AT THE BOOK ANY LONGER. In response, the mother closed book sharing. Two of the mothers in communicative dyads did not immediately interpret gaze averting and reaching away as closure. However, when the baby combined mouthing the book with averting gaze, the mother responded to the combination behaviors by

closing the activity. The dialogue in excerpts 4.48-4.52 was typical of this closing in two of the communicative dyads.

Typically, the noncommunicative and marginally communicative mother did not respond promptly to her baby's cues. She seemed to ignore or inappropriately interpret her child's signals. Consequently, the baby added on behaviors that intensified the baby's request to end. The least synchronized endings were observed in the noncommunicative dyads. Until the end, it appeared that the mothers in these dyads were preoccupied with persuading their children to look and listen. The effect of asynchronous interaction was explained by Brazelton et al. (1974):

When the interaction is not going well, more intense withdrawal or active rejection of the other actor may occur. This may be the result of a specific inappropriate stimulus, or after a series that overloads his capacity for responsiveness. (p. 59)

In what seemed to be insensitivity to their infants' cues, noncommunicative mothers did not overtly respond to their babies' declining tactile and visual actions toward the book. Perhaps they interpreted the decline as successfully bringing the infants' behaviors into accord with their expectations that the children would settle down and look and listen. It was not unusual that, amid the stream of disconnected exchanges, noncommunicative mothers ignored the babies' gaze averting, squirming, and attempts to distance themselves by crawling away. Rather than end the activity, these mothers continued coaxing their babies to look at the book, sometimes resorting to physical restraints. When her child turned away from the book, one mother pulled the child back. Two mothers who were seated with their infant sandwiched between their legs, enveloped their babies in their arms and

used the position to restrict the infants' views. When one baby turned away from the book, his mother used her arm to shield the surrounding view, as if she intended to prevent the child from becoming interested in something in the environment. When the child attempted to move away from the book, the mother moved the baby's upper torso with her arms to realign the child's line of sight with the book. The pattern of disconcerted exchanges usually continued until the infant unequivocally demanded to end the activity. Unequivocal demands included combinations of distressful vocalizations, refusing to focus on the book, crawling away, pushing away from the book, and squirming to evade the mother's bids to interact. This quality was demonstrated in the following dyad:

- 4.67 M: (Keeping the child between her legs)
How about we turn around here?
C: Vocalizes (Holding the book begins to chew on it)
- 4.68 M: No, no; you can't chew on it.
You can't chew on it.
C: Vocalizes (agitated sound)
- 4.69 M: No
C: Screams
(Pushes away from the book)
- 4.70 M: Shelly (Calling the baby's name)
C: (Turned away from the book toward M)
- 4.71 M: Look at this.
Look-a here.
Hey, hey, tsk, tsk, tsk. (Taps the book with her finger)
C: Crying (Turns her back toward the book, biting on M's arm).

Typically, the noncommunicative mothers did not seem to be too concerned with expressing positive affect. They seemed more concerned with the task of getting their babies to focus attention on book sharing. These types of experiences

were reminiscent of Demos' (1982) description of a dyad where the mother's declaratives and directives made it clear that her goal was not to establish reciprocity and conversation. Rather, the goal was to get the child to maintain a standard of behavior. In this instance, noncommunicative mothers demonstrated that book sharing was not about talking to each other in the spirit of cooperative actions (i.e., alternately reciprocating and initiating ideas and tasks). Rather, book sharing meant "showing" and "labeling" the pictures for their children, who in turn should only "look" and "listen." In effect, the interaction was one-sided: only the mothers talked, and the children only looked and listened. Noncommunicative mothers appeared to accept nothing less and nothing more than following through with the expected point/say--look/listen routine.

In the marginally-communicative dyads the initial exchanges were disconnected (nontask related) until the mother--through what appeared to be trial-and-error--discovered that reciprocal exchanges could be achieved if she cooperated with her infant. The activity ended similarly. Each of these mothers made more than a few attempts to redirect her child's attention toward the book before finally conceding that the baby had lost interest. Usually, they pointed to a picture, tapped on it, and used their most expressive voice. Sometimes the child attended momentarily, but the mother's novel expressions usually did not entice the baby to continue on.

One tactic that was unique to this group was to chase the child with the book. For example, when an infant turned away from the book, the mother moved the book directly in front of her partner's face. If the infant squirmed or crawled away, the mother followed with the book, bidding for her child's attention

as she pointed and talked. Because the book was placed directly in front of the baby's line of sight, there was little choice than to look; however, the child's interest was short lived. "The chase" was demonstrated by the following mother and her infant.

The infant's body language is the first indication of waning interest. The mother acknowledges the child's signal but disregards the child's request.

- 4.72 M: A-a-ah, bunny rabbit, (Pointing)
A mouse.
C: Leans away at a right angle from the book so that his back is to the book.
- 4.73 M: Hey, I want your attention my way.
(Taps C's leg twice with her finger)
Hey (Reaches for C's left shoulder)
C: Loses balance and lies on his right side)

Placing the baby on his stomach appeared to be a way to reduce his physical activity.

- 4.74 M: (Puts the book down)
Lost your attention span, chuckles.
(Reaches over and places C on his stomach facing the book)
C: (On his stomach, not looking at M, not looking at the book, he scans the area, spots a ball, and reaches for it)
- 4.75 M: Here. (Places the book directly in front of C; at the same time she removes the ball from C's reach. She holds the book up before C's line of vision)
C: (Looks at the book)
- 4.76 M: (Turns the page)
Oops! (She turned the book in the wrong direction)
(Turns the page again) Oh, goes this way.
C: (Reaches toward the book. M ignores the gesture)
- 4.77 M: Here, here, lookit, lookit.
Look what mamma's got, see?
(Moving the book into C's line of vision)
C: (In the crawling position. Moving and rocking from side to side)

- 4.78 M: Birdie
Look at the birdie. (Holding the book in
C's line of vision pointing to the picture)
C: (Looking at the book. Leans forward and touches the
page)

The mother had an opportunity to establish an interchange by incorporating the infant's tactile behaviors, but she seems content that the child is looking at the book.

- 4.79 M: (Turns the page without acknowledging C's
action toward the page)
Oooh! (Mock excitement)
And what do we have here?
C: (Crawls away)
- 4.80 M: Hey, I lost your attention again.
(Momentarily touches C's shoulder as if to get his
attention) (Moves a toy, perhaps to avoid distraction)
Oooh! (Mock excitement)
There's a kitty cat. (Points to the picture)
(Holding the book in C's line of sight)
C: (Looking at the book)
- 4.81 M: See the doggie.
Doggie?
(Holding the book directly in front of C's line of sight,
she quickly glances in C's face) [as if checking to see
where he is looking]
C: (Crawling)
M: (Moving with C, keeping the book in his line of
sight)
- 4.82 M: (Moves the book away from C)
That's what you got next door.
Lookit, a horse.
See the horse?
C: (Not looking at the book)
- 4.83 M: Fish. (Turns the page)
Oh there's Grandpas's ducks.
C: (Not looking at the book)

- 4.84 M: (Reaches to remove a toy) [perhaps to avoid distraction]
 See the ducks. (Points to the picture)
 And the cow. (Points to the picture)
 C: (Looking at the book)
- 4.85 M: O-o-oh. (Expressive)
 See, there's the donkey again.
 (Looking at the book)

Finally, the mother decides that the baby is not interested and she closes book sharing

- 4.86 C: (On hands and knees pawing at the book)
 M: Think this is about all we're going to get out of the book.
 Laughs.
 He's more interested in this (meaning a toy).
 Begins to play with the toys.

Although the mother interpreted the child's behavior as expressing his lack of interest, she disregarded the behavior and continued to press the child to continue by chasing him with the book. Even though she remained composed and maintained a moderately low and expressive tone of voice, she could not convince the baby to continue. Characteristic of the trial and error approach, only after several unsuccessful attempts to redirect the child's interest toward the book were marginally communicative mothers willing to accept the idea that their infant had signaled closure.

Pathways to Literacy: Recurrent Themes in Book Sharing

What themes characterized the semantic content of the verbal and nonverbal expression and conduct employed by a sample of 13 mothers to carry out book sharing with their preterm infant (i.e., what topics dominated book sharing)? The final level of analysis involved locating regularities in the

mothers' dialogue that might link the three activity phases to a central idea or purpose. At this juncture, the analysis focused on the semantic content of the interaction sequences across dyads, in search of messages that would tie the components of the book sharing format together. In other words, what were the mothers trying to accomplish?

Unraveling the semantic content of the teaching dialogue required taking into consideration the situation (place in the book sharing format during which the behavior occurred) and the social context in which it occurred (pre-and postactions taking place between mother and infant). These measures were necessary because the meaning of a gesture could not be assumed from its precise movement or utterance alone; rather, the semantic value was socially as well as linguistically embedded. The following elaborate this point: (a) In practice, most communicative gestures consisted of a sequence and sometimes simultaneous coordination of two or more actions and (b) particular gestures were often associated with one of the three activity phases, however, they were not exclusive to any particular phase and therefore could be assigned different meanings. Meaning usually was closely linked to the task that the mother was trying to accomplish, the infant's actions, and the preceding and proceeding action sequences.

Hence, the content of the mothers' gestures was situation dependent and derived semantic value in the particular context of the moment. This point is illustrated in the following three examples of the gesture, "enveloping the baby," as it was observed in various contexts:

1. During the organizing phase enveloping the baby in a nesting position was a way of organizing the setting for book sharing. In this context the gesture typically emerged as a postural arrangement, initiated by the mother, to facilitate shared visual access to the book. Semantically, the general inference was, WE MUST LOOK AT THE BOOK, THIS IS HOW WE CAN VIEW THE BOOK TOGETHER. Followed by a question such as, "[Are] you all set?" the mother's behavioral sequence was also intended to influence the affective climate by ensuring the infant's comfort. The message in this sequence was WE MUST LOOK AT THE BOOK; THIS IS HOW WE CAN VIEW THE BOOK TOGETHER. ARE YOU COMFORTABLE?

2. During the entraining phase, enveloping the infant was a way to maintain positive affect. The mothers would regulate the affective climate by intermittently encircling the infant in her arms as if to communicate affirmation of the child's actions. Sometimes, coupled with rubbing her cheek against the child's head and/or whispering or cooing into the child's ear, the gestural sequence communicated the mother's enjoyment of the activity. The general inference was, SHARING A BOOK IS FUN; I LIKE INTERACTING WITH YOU AROUND A BOOK. In response to unsolicited actions toward the book, enveloping the baby was a way for the mother to use her arms to block the infant's attempts to touch the book. The general inference of this prohibitive maneuver was to reinforce the rules and remind the baby that, IT IS NOT APPROPRIATE FOR YOU TO TOUCH THE BOOK; JUST LOOK AND LISTEN.

3. During closing phases the gesture was customarily employed to redirect the infant's actions. In response to infant gaze-averting, enveloping and

maneuvering the infant's body with her arms was a way to channel the child's waning attention toward the book-- the general inference was, YOU SHOULD PAY ATTENTION; LOOK AT THE BOOK.

As expressed in the beginning of this chapter, against this backdrop of contextually embedded meanings it was not feasible to compile an exhaustive list or a glossary representing exclusive meaning for the mothers' discrete movements and utterances. However, interpreted within the context of occurrence, it was possible to discern the semantic content of the mother-infant behavioral sequences.

The recurrent themes across dyads suggested that sharing a book was a teaching-learning event wherein the mother's ultimate purpose was to socialize her infant to the cultural experience, as she understood it. The teaching-learning process involved (a) taking reciprocal turns doing and saying something about the book and (b) through this medium the mother introduced the tasks that she considered appropriate for book sharing, thereby promoting the child's emergent knowledge of the ideas and the skills that are generic to interacting with a book as a literacy artifact.

The mothers' expressions to their babies primarily focused on ideas and skills that were appropriate for physically interacting with the book, rather than on the content of the book. This is likely because, as the result of the onset of crawling and the approach of object permanence, the 6-month-old babies are usually in transition from dependence to independence. Consequently, it is not surprising that toys within the physical environment presented attractive nuisances that interfered with the mothers' efforts to establish and maintain their

infants' attention. Furthermore, in keeping with the nature of the infants' sensorimotor stage of development, with or without the mothers' encouragement, the babies' spontaneous tactile behaviors toward the book were not surprising. Thus, the explanation for the prominence of teaching and learning that related to physically interacting with the book is perhaps explained as a function of the infants' developmental level.

The semantic content of the interaction phases provided insight into what and how the social dynamics of mother-infant book sharing might contribute to the child's emergent literacy development. I have drawn from research and theory that primarily related to infant development within the context of mother-infant interactions to draw inferences regarding how the experience influences the child's emergent literacy development. The following themes characterized the content of the participants' teaching-learning dialogue.

Promoting book sharing skills involved introducing processes that are appropriate for "sharing" ideas and tasks around a book. Communicative intentions are generally not ascribed to an infant prior to the age of 7 or 8 months (Bruner, 1975). However, although there is no implication that the baby intends to direct the mother's attention to the object, mothers establish the appearance of the child intentionally sharing actions toward the book by monitoring the child's ocular behaviors and coordinating her attentions with the child's visual target. In these episodes, coorientation of mother-infant gaze to the book was usually established as the result of the infant initially tracking the mothers' hand movements and the mother subsequently following the infant's line of gaze.

Each mother's primary task was to first establish that the baby was attentive. It appeared that the mother interpreted her baby's gaze toward the book to indicate attentiveness. Second, through coorientation the mother established that a topic (the book) was being shared (Bruner, 1977). Third, the mother capitalized on the baby's looking behavior to negotiate an exchange mode of point/say-look/listen around the book, indicating that both mother and baby were participating in the same activity (Bruner, 1977). Finally, (as in the communicative dyads) if the baby cooperated by following along in a repetitive cycle, the mother negotiated a more sophisticated reciprocal mode. The exchanges progressed to what appeared to be a division of roles that were not identical and appeared to be well defined. For example, the mother pointed to a picture and commented; in turn, the infant looked where the mother pointed; upon the mother's pause or glance, the infant turned the page. The main idea was **SHARING A BOOK MEANS LOOKING AT THE BOOK TOGETHER AND TAKING TURNS DOING PARTICULAR THINGS IN A CERTAIN SEQUENCE**. Examples that were implicit in the book sharing dialogue included:

- WE LOOK AT THE BOOK TOGETHER
- WE TAKE TURNS POINTING TO AND LABELING PICTURES

The infant's primary task to be learned was to share the object of attention: focusing on and maintaining attention toward the book (visually orienting on the book) and learning to take an appropriate action in the sequence, such as looking where the mother pointed, turning the page (sometimes with assistance), or touching the page when the mother paused. If the dyad accomplished these tasks, the exchange sequences resembled taking turns in a conversation where

both mother and baby alternately initiated and reciprocated ideas and actions that referenced the book.

The turn-taking pattern of book sharing is particularly suited to promote the infant's awareness that his or her behavior is communicative, in that it can be used as a means of influencing another person. Schaffer et al. (1977) noted that early involvement in the turn taking pattern

maximizes the opportunity for [the infant] to learn that his behavior is of interest to the mother, that it will be attended to and elicit a response from her, and that it is worth his while to attend to her response in turn. (p. 12)

Establishing the taking of turns around the book also has strong implications for encouraging the child's oral language development. One of the precursors of language development is the alternation of comments upon a common topic (Bruner, 1975); within this framework, eye contact is an important notice of the exchange of speaking turns (Kaye, 1977). "Turn taking is more than just a characteristic of language . . . it is a necessity for the *acquisition* of language" (Kaye, 1977, p. 93). It appears that the reciprocal nature of book sharing promotes the infant's progression toward the acquisition of the dialogic pattern that is necessary for communication and contributes to the infant's sense of accomplishment.

Promoting ways for physically interacting with a book as a literacy artifact

involved introducing processes for appropriately handling and manipulating the book. The mother's primary task was to channel the infant's tactile behaviors toward the book into actions that approximated what she considered appropriate for manipulating the book. The main idea was "WHAT WE DO WITH A BOOK

IS DIFFERENT FROM WHAT WE DO WITH TOYS. Ideas that were implicit in the dialogue included,

- THIS IS NOT A TOY. THIS IS A BOOK
- WE MUST HANDLE THE BOOK CAREFULLY SO THAT WE
DON'T TEAR IT
- BOOKS ARE NOT TO BE EATEN
- WE READ BOOKS

The infant's primary tasks appeared to be following the mother's guide to learn how to manipulate the book as a literacy tool. For example, the mother assisted her baby in learning how to turn the pages from right to left, turn the pages one at a time, and to turn the pages in sequence from the front to the back. Through this type of activity and the mother's narrative, the baby would learn that there is a particular order for page turning and that turning the page changes the picture (changes the text); e.g., "You want to turn the page? Lets see what happens next?" One mother's explanation to her baby expressed the main idea clearly, "Turn the page, gotta turn the page to read it."

Promoting ways for taking meaning from books involved introducing processes for gathering information from pictures (i.e., "reading" the pictures). Coorientation with the baby was the mother's main task. A mother usually achieved coorientation by following the infant's line of sight, then developed a narrative around the item that she determined the child to have focused on. However, sometimes she persuaded the child to switch attention to focus on an item of her choice. Pointing and tapping on the picture and placing the book directly in the child's line of sight were the most common approaches for trying to

get the infant to focus on the mother's choice. The mother who followed her infant's line of regard usually was more successful in her efforts to establish joint attention. The rationale for this finding may be explained as the function of developmentally appropriate expectations for the 6-month-old baby. From their review of Tomasello's (1988, 1992) account of the role of shared-attentional episodes in early lexical development, Dunham and Dunham (1995) concluded that, "lexical acquisition is assumed to be easier when the contingent adult is reciprocating the infant's gaze (i.e., attention-following), and more difficult when the contingent adult is not reciprocating the infant's gaze (i.e., attention-switching)" (p. 172).

The main idea for taking meaning from books was PICTURES ARE SYMBOLS THAT REPRESENT OBJECTS AND EXPERIENCES IN OUR DAILY LIVES. Ideas that were implicit in the dialogue included,

- THE PICTURES/OBJECTS HAVE NAMES (Pictures represent objects)
- PICTURES TELL US SOMETHING (Pictures are symbols; they represent thoughts)
- WHEN WE NAME THE PICTURES WE ARE "READING"
(Pictures are symbols; they represent objects)
- WHEN WE NAME THE OBJECTS AND TALK ABOUT THE IDEAS THAT ARE REPRESENTED IN PICTURES, WE ARE "READING" THE BOOK (Pictures tell us something. When we *read* we share the messages that are contained in the pictures. *Reading* means sharing ideas. *Reading* means communicating).

Customarily, the mothers modeled ways to extract meaning from the contents of picture books. They simultaneously pointed to the picture and described a scene: "Look. There's a garden to dig in." They labeled the picture: "A cow." They imitated the sounds of the animal represented: "Moo, Moo," and they commented on the personal experiences from which the infant should recognize the picture:

- 4.82 M: That's a dog. (Pointing to the picture;
glances quickly into C's face)
Like your puppy at home.
See your puppy?
That looks like Neal? [Both statements were made
with a questioning inflection]
- C: (Looking intently at the picture. Reaches for the book)
See here. (Points with finger on the picture and
rubbing the picture)

The infant's primary task was to share the object of attention: looking at the picture and listening as the mother talked about the picture, looking where the mother pointed, responding with pleasure and amusement to the mother's expressions, making eye contact, smiling, touching such as holding onto the mother's arm, and vocalizing pleasant sounds.

Typically, the mother incorporated her infant's behaviors into the teaching-learning interactions by imputing the child's turn, as if the child intended to express an idea or ask for information. Usual interpretations for the baby's actions were: that the child directed her attention to pictures of interest by touching (or trying to touch) the page and that the child's visual gaze was intended to indicate a place on the page that was of interest.

Labeling pictures is a common form of early "deictic tutoring" and has long been recognized as important for lexical development (Anisfeld, 1984). The

process involves marking off a particular object by pointing to it, gazing at it, or touching it; at the same time that the target is visually marked, the mother names it. This form of tutoring in the context of mother-infant picture book reading has also been recognized by Murphy, (1978) and by Ninio and Bruner (1978) as contributing to the baby's language development and appears to be a format for promoting referential meaning. Deictic tutoring in mother-infant book sharing is likely the precursor to what Luria (1982) referred to as referential meaning. It is different from conceptual meaning in that referential meaning consists of correctly labeling or naming objects. Conceptual meaning entails an appreciation of the essential properties that characterize the objects named by words. Luria contended that even after the referential meaning of words stabilize, their conceptual meanings continue to develop as the child's cognition develops. As the result of the book sharing context, the child learns appropriate labels, but it takes time before they acquire a true understanding of the meanings of their responses

Promoting appreciation for book sharing involved introducing the idea that interacting around a book is worthwhile. The mother's primary task was to support the baby's participation within an positive psychosocial environment. The main idea was SHARING A BOOK IS A FUN ACTIVITY. Ideas that were implicit in the mother-infant dialogue included,

- I HELP MOTHER AND MOTHER HELPS ME WHEN WE
SHARE A BOOK
- I DO A GOOD JOB WHEN I SHARE A BOOK
- SHARING A BOOK IS FUN

- MOTHER LIKES SHARING A BOOK WITH ME
- I LIKE SHARING A BOOK WITH MOTHER

The infant's primary task was to do something that the mother could interpret as appreciation for the activity such as reaching for the book, touching or holding the mother during the interactions, smiling, giggling, cooing, looking intently at the book, and initiating and reciprocating face-to-face contact. The mother usually spoke in varied expressions and tones that indicated warmth and excitement. She sometimes reflected the child's positive regard for the activity, e.g., "Say I like books," or "Ye-e-a-ah." (exaggerated "yeah" seemed to be a generic response of pleasure).

Emotion, such as appreciating sharing a book, is not magically transferred from mother to infant. The baby helps to coordinate the affective climate. Infants generate their own emotions as they process the emotional input provided by their mother, in relation to their own interactive goal (Tronick, Cohn, & Shea, 1986). The infant's emotional displays convey,

an evaluation of the partner's action, the emotional state of the interaction, and signal the infant's direction of action. For example, smiles typically indicate a positive evaluation and signal that the infant will continue his direction of action, whereas grimaces and frowns express a negative emotional state and signal a change in the infant's direction of action. (Tronick, Cohn, & Shea, 1986, pp. 11-12)

The infant often uses the mother as a source of social referencing; that is, the child monitors the mother and responds in accord with the affective expression that the mother displays toward a situation (Baldwin, 1995). Given the quality of affect in their interactions, it is likely that the participants in the noncommunicative dyads would not develop the same appreciation for book sharing as their communicative counterparts.

The essence of these 13 mothers' response to the request "Would you please share a book with your child?" is that the experience with a 6-month-old infant is an interactive process through which mothers teach their baby to interact with a book as a literacy artifact, as the mother understands it. Gestures and tasks that were prominently associated with teaching-learning are indicated in Table 3. As previously mentioned, there is no one-to-one correspondence between the mothers' discrete gestures and any one task. Furthermore, the inferences of teaching-learning tasks were drawn from the semantic content of the mothers' collective dialogue; hence, all of the examples were observed in each of the 13 episodes.

Summary

Emergent Literacy Development in the Context of Book Sharing: The Nourishment of Affect

The social dynamics in these 13 dyads illustrated the challenges that mothers confront sharing a book with a prelinguistic infant. The variations in communicative patterns highlighted the bidirectional nature of the activity and illuminated the influence that positive affect plays in accomplishing book sharing with a baby.

Book sharing as portrayed by these mothers was a cultural learning process through which their babies acquired the conventional knowledge and skills that are associated with interacting with a book. The semantic content of the mother-infant teaching-learning dialogue indicated "what" the baby learns as the result of participating in book sharing. It was apparent that the mothers held similar ideas of what should be introduced. The difficulty for the mothers rested

Table 3
Examples of Teaching-Learning Goals Associated with Mothers' Book Sharing Dialogue

<u>Teaching Behaviors</u>	<u>Implied Learning Goals</u>
<u>Promoting Book Sharing Routines</u>	
Refers to the activity as a joint enterprise: ("Come on, let's look in the book.") Arranges posture so that both partners can view the book.	<ul style="list-style-type: none"> • We look at books together • This is how we can view the book together
Solicits/encourages interaction: - Pauses for C's response - Synchronizes her responses with C's actions	<ul style="list-style-type: none"> • We take turns doing and saying something related to the book: I do something; then you do something
Imputes meaning as if C's action is task-related: - Encourages C to touch/hold the book - Assists C's efforts to turn the page - Smiles or gives spoken affirmation in response to C's action toward the book	<ul style="list-style-type: none"> • This action is appropriate for book sharing
<u>Promoting Interactions with Books</u>	
Sets the stage: - Removes toys - Arranges posture	<ul style="list-style-type: none"> • What we do with a book is different from what we do with a toy
- Refers to the text as a "book"	<ul style="list-style-type: none"> • This is a book
- Refers to the activity as "reading"	<ul style="list-style-type: none"> • We read books
- Begins at the front of the book	<ul style="list-style-type: none"> • We begin reading at the first page of the book
Solicits looking: - "Look at this" - "See the little boy?" - Points/taps a picture to mark the target and to encourage C to look	<ul style="list-style-type: none"> • We look at the pictures
Indexes content: - Speaks as she points - Comments about pictures while C touches the picture - Follows C's gaze then points where C is looking	<ul style="list-style-type: none"> • These are ways to indicate: <ul style="list-style-type: none"> - We use our finger to indicate where to look - We use our eyes to indicate where to look

Table 3--Continued

Teaching Behaviors	Implied Learning Goals
<u>Promoting Interactions with Books--Continued</u>	
Labels and assists C's actions: <ul style="list-style-type: none"> - "Do you want to turn the page?" - (Assisting C) "That's right, turn the page." 	<ul style="list-style-type: none"> • This is a page <ul style="list-style-type: none"> - We turn the page from left to right - Turning the page changes the text
<u>Promoting Ways for Taking Meaning from Pictures</u>	
Labels pictures: <ul style="list-style-type: none"> - "Here are the animals." - "Horse. See, horse." 	<ul style="list-style-type: none"> • Reading is informative. <ul style="list-style-type: none"> - We look at the pictures - Items have names - We name the items
Describes pictures: <ul style="list-style-type: none"> - "They are having a birthday party." - "See the girl. [The] girl is swinging." 	<ul style="list-style-type: none"> • Pictures represent ideas: <ul style="list-style-type: none"> - We talk about the ideas that pictures represent
Indicates familiar pictures: <ul style="list-style-type: none"> - "These are grapes. your brother's favorite kind of fruit." - "Oh, there's Grandpa's ducks." 	<ul style="list-style-type: none"> • Personal meaning is associated with pictures: <ul style="list-style-type: none"> - We tell how the items relate to our lives
Uses expressive tones: <ul style="list-style-type: none"> - "Duck. Quack! Quack!" - "Cow Moooo, Moooo." 	<ul style="list-style-type: none"> • Some attributes are associated with pictures: <ul style="list-style-type: none"> - We imitate sounds that match items - Book language is fun
<u>Promoting Appreciation for Book Sharing</u>	
Uses affectionate gestures: <ul style="list-style-type: none"> - Envelopes/cuddles C without restricting C's movement - Whispers and coos - Speaks in a moderately low affectionate tone - Smiles frequently - Makes frequent eye contact while maintaining pleasant facial gestures - Imputes positive intentions and makes affirmative comments for C's actions <ul style="list-style-type: none"> - "You turned the page." - "Say, I like books." - "Do you want to help me turn the page?" - "Ye-e-e-ah. That's right." 	<ul style="list-style-type: none"> • We enjoy interacting together with a book

Table 3--Continued

<u>Teaching Behaviors</u>	<u>Implied Learning Goals</u>
<u>Promoting Appreciation for Book Sharing--Continued</u>	
- Ends if C loses interest (e.g., withdraws gaze, protests)	• Book sharing is not a chore; we stop when you or I want to
- Continues when C loses interest (e.g., withdraws gaze, protests)	• Book sharing is a chore; we stop when the adult gives permission

in how to engage a 6-month-old baby in the activity that they envisioned. The variations in book sharing among these 13 dyads indicated that mothers were more familiar with "what" than "how" to promote their child's learning in the context of book sharing. Regardless of the mother's ideas of what should take place, the child was an active participant and coauthor in the regard that the semantic content of book sharing primarily evolved around the mother's responses to her child's uninformed, spontaneous actions.

The mother-infant communicative styles provided insight into understanding the teaching-learning process and demonstrated that sharing a book with a 6-month-old infant is more than the simple exchange of point-say and look-listen. The mother's role in the baby's socialization is that of teacher or guide; however, it is an interactive process wherein the baby's contribution cannot be ignored. Consequently, successful book sharing requires a set of finely tuned skills that are suitable to composing text for a wordless picture book while simultaneously incorporating the child into the activity by composing a dialogic script around book related activities and the child's spontaneous actions toward the book.

It is clear from these episodes that, absent reciprocal exchanges, the mothers lacked a communicative channel through which to introduce teaching-learning tasks and that maternal responsiveness is the key vehicle for mother-infant communication. Dore (1983) explained that much of the form and content of communication between infants and their caregivers in the first year of life depends upon affective expressions. The exchange of emotional messages function as a mutual regulation model (MRM) in that one partner's goals are achieved in coordination with those of the other (Tronick, 1980; Tronick, Als, &

Brazelton, 1980). From this basis, "when the child's social interactions result in a shared positive emotional state the infant develops a sense of effectance. When such interactions do not accomplish this goal, the infant develops a sense of ineffectance or helplessness" (Tronick, Cohn, & Shea, 1986, p. 12) and withdraws from the interaction. The mothers in these dyads demonstrated that positive, responsive maternal behaviors are pivotal to effective book sharing. In particular, the frequency of non task related exchanges in the marginally communicative and non communicative dyads affirmed the assertion that when mother and infant do not share the same agenda the "sharing" relationship is stressed; consequently, effective book sharing is impeded, if not completely insurmountable.

The following summaries of the patterns of mother-infant interactions provide insight into how the quality of maternal responsiveness influences successful book sharing with a 6-month-old infant.

Communicative Dyads

The mother framed the activity within a positive emotional atmosphere marked by pleasant gestures such as warm and expressive verbal tones, making frequent face-to-face contact as if checking the infant's eyes to determine the child's interest, smiling and looking with wide eyes (pleasant facial expression) while talking to the baby, respecting the infant as a coequal partner by frequently pausing as if the child said or did something to reciprocate her actions or initiate a new action sequence, and by coaxing the child to physically interact with the book so that the infant's turn could be established.

Book sharing resembled a game wherein the child was the "player-maker" who least understood the rules. However, the mother repeatedly "called the plays" in the child's favor by incorporating the infant's spontaneous conduct as if the child had taken an appropriate turn. She encouraged tactile exploration and supported the performance of instrumental tasks that the child was not capable of completing by assisting the child to hold, touch, and turn the pages. In effect the mother's contingent responsiveness gave the child's uninformed conduct a quality of intentional participation.

As the mother and infant responded within a cycle of repetitious exchanges, the child required less coaxing to take a reciprocal turn. Ultimately, they entrained in book sharing by locking into repetitive exchanges that gave the appearance of the mother and child alternately initiating and responding to each other's gestures. The mother employed a repertoire of pointing and using expressive tones that created a warm atmosphere and her novel expressions appeared to help sustain the child's interest.

Once locked in, the mother advanced the teaching-learning tasks by channeling additional spontaneous conduct into their dyadic script. She did so by imputing meaning to almost anything that the baby did toward the book; for example, if the child touched the book the mother imputed the intent to hold the book, direct her attention to look at a place in the book (point), or to turn the page. It appeared that as the result of the mother's imputations and often repeated cycles of exchange, the infant became a more reliable participant.

The ritual-like exchanges continued until the infant withdrew attention from the activity; in turn, the mother promptly reciprocated by closing the episode.

These interactions are best described as child centered. The mother created a learning atmosphere by capitalizing on the infant's spontaneous behaviors, consequently turning the activity into a mutually guided learning process in that both mother and baby appeared to teach and learn.

Noncommunicative Dyads

The event was framed within an atmosphere of negative affect as the result of the mother's frequent expressions of controlling behaviors, directives, and reprimands in response to the infant's spontaneous actions toward the book. Due to the mother's imputations of the infant's actions as defiance, the dyad engaged a few units of task related exchanges that were randomly located within streams of nontask related interactions.

The social dynamics of noncommunicative dyads were dominated by mothers trying to adhere to the respective mother-infant exchange of point/say--look/listen. The vigor with which most pursued this pattern suggested that, for these mothers, the respective roles were not open for negotiation. Throughout the episode, the mother focused most of her teaching gestures on promoting the child's awareness that touching the book was not an appropriate turn; the task was reserved for her alone. Inasmuch as they were rarely followed-up by an imputation of task or nontask-related intent for the child, the few mutual exchanges that the dyad connected seemed to be to be accidental (without rational intent on the mother's behalf for the next gestural sequence). Rather, the mother's acquiescence seemed to signal that she considered the conduct appropriate. This type of exchange sequence gave the impression that

beyond the point/say--look/listen model of book sharing, the mother was lost for alternatives for her own participation as well as her infant's.

Because the dyads were not able to achieve ongoing reciprocal exchanges that referenced the book, they were not able to establish a communicative channel. Hence, they did not entrain in book sharing. Due to the intrusive nature of the noncommunicative dyads, their teaching-learning goals did not progress beyond promoting book sharing skills (i.e., learning to look at the book together). Their children were expected to focus attention on the book (look) and listen to their mothers. The episodes ended when the mothers gave up trying to get the babies to focus on the book.

It seems appropriate to say that book "sharing" did not take place in the noncommunicative dyads. The interactions in these dyads are best characterized as adult centered. The mother's agenda and the infant's agenda were different, and only the mother's agenda could prevail. Perhaps these mothers viewed teaching and learning as the result of what is done to the baby, rather than what is done with the baby.

Marginally-communicative Dyads

Initially, the social atmosphere and the dyadic exchanges mirrored the noncommunicative dyad. However, it seemed that through trial and error the mother realized that reciprocal exchanges could be achieved if she reversed their respective point/say--look/listen roles. She did so by composing a dyadic script around the infant's actions in the same fashion as communicative mothers.

As the result of reversing their roles, the mother and her infant were able to engage sequences of reciprocal exchanges. However, they were not able to

entrain in book sharing because the infant's attention span did not withstand the prolonged attempts to negotiate their reciprocal roles. The episode ended with the infant withdrawing. After several unsuccessful attempts to persuade her baby to continue, the mother seemed to realize that her infant would no longer cooperate. Thus, the activity ended.

The value of reading to a baby from the first day home from the hospital most likely rests in the affective quality of the interaction.

The infant begins by becoming actively involved in the process of communicative interaction as a step towards acquiring *content* in the form of mental constructs or understanding, which he begins to share with persons only as he regularly engages in communication. (Newson, 1977, p. 48)

Communication is the process through which the child's initial lack of understanding may be overcome (Robinson, 1988). Hence, it is reasonable to conclude that as the result of regularly interacting with their mothers in the context of book sharing, infants practice and learn the cognitive and physical skills that are associated with the activity. The consistency of contingently appropriate social interchanges with a supportive mother who is sensitive to her baby's needs enables the baby to progressively achieve greater communicative competence. Through responsive interactions, the mother scaffolds dialogue by imputing meaning to the child's behavior as if the baby intended to make an appropriate contribution. It is within this rudimentary framework that the mother and her infant progress to meaningfully communicate and it is within this cooperative enterprise of "guided participation" (Rogoff, 1990, Rogoff, Mistry, Göncü, & Mosier, 1993) and "co-construction" (Winegar, 1988) that the baby learns the cultural conventions of interacting with books as a literacy artifact.

CHAPTER V CONCLUSIONS AND IMPLICATIONS

Summary of the Study

The purpose of this study was to provide a descriptive analysis of the social organization that characterized book sharing between 13 mothers and their 6-month-old, prematurely born infants as they carried out book sharing. Many educators and child development specialists attest that storybook reading, as early as infancy, positively influences children's literacy skills. However, notwithstanding the overwhelming enthusiasm for recommending "read to your baby" from the time of birth (Hurst, 1996), and certainly by 6 months of age (Trelease, 1982), the nature of the interaction that is believed to influence emergent literacy development is largely unknown. The few studies of mothers reading to babies have primarily included middle-class mothers and their healthy, full-term infants; only one study has included babies who were born prematurely and sick. This study was undertaken in recognition of the dearth of published research on mothers reading to children under the age of 2 years and studies that included infants who were born prematurely and high risk for developmental delays.

This descriptive analysis of book sharing furthers our awareness of what mothers do when they read to a baby. Such data provide a base from which to draw inferences about what and how dimensions of interactions between mother

and infant might influence the child's emergent literacy development. These data serve as a contextual base from which practitioners may advise mothers of prematurely born babies how to effectively involve their child in book sharing.

The research model was grounded in the theoretical framework of symbolic interactionism. The inquiry was undergirded by the assumptions that the nature of the social dynamics of mother-infant book sharing is unknown; that is, we do not know how mothers and their infants who were born prematurely and high risk for developmental delays transact the event. However, the event is a social construct. From this perspective, in accord with symbolic interactionism theory, the nature of book sharing is grounded in the participants' communicative conduct and content (Denzin, 1992) and therefore capable of being identified through the observable expressions and conduct, wherein the experience derives its character. In harmony with this view, the inquiry process focused on the verbal and nonverbal behavioral dialogue that 13 mothers engaged with their infant in response to the request "Would you please share a book with your child?"

The setting of book sharing was entered through episodes of book sharing that were captured on audio-videotape. Approached as a practical interactive phenomenon, the nature of the experience was revealed through features of dialogue—verbal and nonverbal expressions—that the participants employed to carry out the event. One broad question served to guide this inquiry process: What features characterized the social dynamics observed in book sharing episodes of 13 mothers and their 6-month-old infants who were born prematurely

and high risk for developmental delays? Four specific questions were addressed:

1. What behaviors did a sample of 13 mothers of preterm infants employ in response to the request "Would you please share a book with your child?"
2. How did a sample of 13 mothers of preterm infants format their behaviors to carry out book sharing with their preterm infant (i.e., what structural organization characterized book sharing)?
3. What features characterized the verbal and nonverbal expressions and conduct employed by a sample of 13 mothers to carry out book sharing with their preterm infant (i.e., how did the mothers mediate book sharing with their infant)?
4. What themes characterized the semantic content of the verbal and nonverbal expressions and conduct employed by a sample of 13 mothers to carry out book sharing with their preterm infant (i.e., what topics dominated book sharing dialogue?).

The composite picture of book sharing emerged through the analytic process adapted from Spradley's (1980) Developmental Research Sequence (DRS).

Summary of the Findings

The analysis of data revealed that these mothers employed a variety of verbal and nonverbal behaviors in response to the request "Would you please share a book with your child?" Specific behaviors were identified across dyads and categorized into domains containing mothers' practices and speech utterances. Domains represented the static components of the mothers' book sharing dialogue and served as indicators of how the participants carried out the

event. The contents of domains were reorganized into taxonomies that revealed that the common features of the mothers' discrete behavioral repertoire primarily related to "organizing" and "negotiating" strategies. The strategies represented their efforts to arrange the physical setting and mediate dialogue with their infant around the book. The taxonomies were represented as follows:

1. Organizing the physical environment--acts to arrange the physical setting and body posture of the dyad (e.g., cleared the immediate area of toys and positioned the dyad in a book sharing posture).
2. Negotiating interactions around the book--acts involving the book as the central focus of activity (e.g., pointed to and labeled pictures).
3. Negotiating affect--acts that related to promoting and maintaining a positive emotional atmosphere and social relations with the infant during book sharing (e.g., spoke in warm expressive tones).

The search for attributes that distinguished the contents of domains and taxonomies focused the data in terms of sequences of actions taking place around a certain time. Most of the mothers carried out the event by organizing a flow of behaviors into three sequential phases of activities. These phases comprised the components of the book sharing format.

Phase I

Organizing the setting for book sharing involved preparing the physical environment to promote the infant's attentive participation. The behavioral flow included removing toys from the infant's view and grasp and arranging physical proximity so that both mother and infant could comfortably view the book.

Phase II

Entraining the dyad in book sharing involved efforts to lock into ongoing sequences of reciprocal dialogue around the book, thereby becoming entrained in book sharing. The behavioral flow included three levels of activity:

1. Soliciting the infant's participation by motivating the child to focus on the book, followed by projecting the expectation that book sharing would evolve around the infant looking and listening in response to the mother pointing to and commenting about the contents of the book;
2. Engaging the infant in dialogue by incorporating the infant's participation in sequences of point/say--look/listen exchanges around the book.
3. Finally, entraining the dyad in book sharing by getting the dyad engrossed in ongoing, ritual-like sequences of reciprocal gestures that gave the appearance of the infant intentionally sharing common tasks around the book.

Phase III

Closing book sharing involved terminating activity around the book. The behavioral flow was characterized by the mothers' responses to their infant's bid to withdraw from the interaction.

The final analysis focused on the semantic content of the mother's behavioral dialogue in search of messages that might link the three activity phases to a central idea or purpose. The themes in the semantic content or the interaction phases pulled the contents of the domains, taxonomies, and components together and provided insight into what and how the social dynamics of mother-infant book sharing contribute to the child's emergent literacy development. The recurrent themes across dyads revealed that book

sharing was a teaching-learning experience. Most of the mothers were trying to establish conversations with their infants around the books and, through this process, introduce their children to tasks that they considered appropriate for interacting with books as literacy artifacts. The following teaching-learning goals were implicit in the mothers' dialogue with their infants:

1. Promoting book sharing skills featured introducing processes that are appropriate for jointly interacting around a book. The main idea was that sharing a book means looking at the book together and taking turns doing particular things in a certain sequence. The tasks involved eliciting and responding to each other's gestures.

2. Promoting ways for physically interacting with a book featured introducing processes that facilitate manipulating a book. The main idea was that books are not toys, "What we do with a book is different from what we do with toys." The tasks involved implementing actions that are appropriate for physically handling and interacting with a book as a literacy artifact.

3. Promoting ways for taking meaning from books featured introducing processes involved in gathering information from picture books (picture reading). The tasks involved encoding meaning to the contents of picture books (picture reading).

4. Promoting positive regard for book sharing featured introducing the idea that interacting around a book is worthwhile. The tasks involved realizing that mother likes book sharing and it is fun to share a book with mother.

Models of Book Sharing

The pattern of interactions that most of the mothers attempted to establish with their infants indicated that book sharing would evolve through taking reciprocal turns doing and saying something that referenced the book. Typically, the mothers attempted to establish the exchange of point-say and look-listen. The mother's principal role was to point to and comment on the content of the text; in turn, the baby's role was to look and listen. However, this pattern was not accomplished by most of the dyads largely because in their response, the infants spontaneously coupled looking and listening with unsolicited actions such as grasping and patting the pages. Two patterns of book sharing emerged as the result of the ways the mothers responded to their infants' spontaneous conduct:

Task-related book sharing was dominated by sequences of reciprocal exchanges around the book. This model emerged as the result of the mother adjusting her responses in synchronous alternation with the infant's gestures, thereby giving the appearance of taking turns in a conversation (communicating).

Nontask-related book sharing was dominated by sequences of disconnected exchanges around the book. This model emerged as the result of the mother failing to adjust her responses to complement the infant's spontaneous gestures, thereby giving the appearance of opposing meaning or intention in the gestural sequence (not communicating).

Measures of task versus nontask-related exchanges distinguished the 13 dyads in terms of their communicative competence; that is, the ability to establish and maintain a flow of reciprocal exchanges that referenced the book.

Conclusions

Book sharing, as portrayed by these 13 mothers and their infants, was a scene of similarities in the experience that most of the mothers projected. However, as the result of the variations in their competence to achieve communicative dialogue there were dissimilarities in what most of the mothers accomplished. The following tenets are supported in the findings of continuities and discontinuities of the participants' responses to the request "Would you please share a book with your child?"

1. The similarities in their responses indicated that these mothers embraced a culturally defined impression of what should take place during book sharing.

- The standard components in the mothers' repertoire including the organization of activity into a three-phase format, the joint-task model of interacting that the mothers projected, and the inferences of teaching-learning outcomes in the content of their expressions suggested that the conventions in the mother's book sharing practices were not happenstance occurrences. Rather, most of the participants appeared to carry out a predetermined notion that was perhaps a culturally acquired tradition, for what should take place

2. Knowing *what* is not the same as knowing *how* to accomplish what should take place around the book.

- Despite the similarities in the mothers' projections for book sharing, their accomplishments appeared to be a function of the quality of dialogue that the mothers and their infants established. The variations in their accomplishments were notably associated with efforts to engage and sustain the projected performer/speaker-spectator/listener model of book sharing, with an infant who frequently introduced tactile behaviors toward the book. Hence, although there appeared to have been a degree of *oneness* in their perception of what should take place during book sharing, there were differences in what the mothers actually accomplished. Might the differences in what they seemed to know and what they accomplished be a function of the mother's skill to transfer a model of book sharing that is conventionally employed with older children to a setting with a prelinguistic infant who makes many uninformed contributions to the activity?

3. Book sharing is not an interpersonal experience in the sense that the mother's knowledge of what should take place is all encompassing. Rather, the experience is regulated by the contributions of both the mother and her infant.

- From the beginning of this study, the mother was viewed as the primary agent because she brings to the event the idea of what is to be done, initiates the interaction, and negotiates with her infant what is to take place. The infant's role was broadly defined as a contributor to the interaction who affects and is affected by the mother's behavior. The mother's role as primary agent was supported in these descriptions. However, the infants controlled a share of the interactions to the extent

that the child emerged as a coequal constructor of book sharing. For example, (a) regardless of how vigorously the mother tried to get the infant to emit only the behaviors that she solicited, failure to incorporate the child's spontaneous contributions usually prevented the accomplishment of joint-task exchanges; (b) the infant dictated the topics of conversation in that the teaching-learning content was derived on the basis of the mother composing book-related dialogue around the child's behavioral contributions that approximated her expectations for the event; and (c) regardless of the mother's efforts to continue, the episode ended when the infant withdrew from the activity.

These findings clarified the mother-infant roles as a partnership where the mother is the primary agent of information and organizational skills. Although the infant is not credited with informed intention, the findings acknowledge the infant's role as a coequal partner whose contributions are not secondary to accomplishing book sharing.

4. The nature of book sharing is more than a social interaction involving the exchange of point-say and look-listen. The event is a communicative process through which mothers introduce their infant to the book-sharing culture, as they understand it. Hence, book sharing is a communicative process through which teaching and learning take place.

- From the beginning of this study, I broadly defined book sharing as a social interaction comprised of verbal and nonverbal expressions and actions. On the basis of this descriptive account of the event, sharing a book evolved through the process of communicating--mother and infant taking reciprocal turns

doing and saying something in reference to the book. Through this medium, the mother composed book-related content to accomplish teaching and learning outcomes--the mother socialized her infant to implement the tasks that she considered appropriate for interacting with a book as a literacy artifact.

5. Communicative competence (i.e., the ability to establish action patterns of a joint nature) is the *sine qua non* of book *sharing*.

- The extent to which dyads accomplished book sharing depended upon their ability to communicate through engaging and sustaining an exchange of turns that meshed into a conversational-like flow of gestures that gave the appearance of both partners doing and saying something to alternately initiate or reciprocate a common idea or task that referenced the book. These types of joint-task actions were seminal to accomplishing teaching-learning dialogue. Hence, neither the process--communicating--nor the outcome--teaching and learning-- occurred absent the competence to organize and sustain action sequences that gave the appearance of mother and infant sharing the same motives.

6. The infant's opportunity to participate was salient to organizing and sustaining book *sharing*.

- The patterns of book sharing that contrasted the dyads on the basis of communicative competence demonstrated that book *sharing* is facilitated by a mother who encourages and supports her infant's conduct as the intent to engage joint actions with her around the book: (a) a mother promoted and held the sharing relationship together by

recognizing her infant as a competent communicator and by imputing motives to the child's conduct that complemented her expectations for book-related tasks; (b) a mother who consistently rejected her infant's contributions by imputing motives to the child that were inconsistent with her expectations negated the child's participation, thus preventing the opportunity to share tasks around the book; and (c) a mother who prolonged her infant's opportunity to participate by initially rejecting then later accepting the child's behavior thrust the sharing relationship into competition with the infant's limited attention span. Although actions of a sharing nature were initiated, the infant withdrew shortly thereafter.

7. Book sharing is a potentially rich contributor to the infant's emergent literacy development. Reasonable conjectures of what and how particular features of book sharing might contribute to the infant's pathway to literacy development were identified in the patterns of interactions and in the semantic content of the participants' teaching-learning dialogue.

- Language is learned in the context of verbal interactions between the infant and caregiver (Anisfeld, 1984). Oral language is promoted when talk is directed to the infant and when the mother responds as if she is conversing with a partner who is a competent communicator.
- The alternation of comments upon a common topic is one of the precursors of oral language development and the acquisition of other kinds of learning. The turn-taking component in book sharing has intrinsic value for the infant's progression toward communicative dialogue: the mother and infant learn the art of alternating language and

para-language modes to reference common ideas and tasks (Kaye, 1977).

- The infant's sense of efficacy and positive regard for book sharing is promoted when the mother responds to the infant as a coequal contributor, constructor, and as a communicator in book sharing. Although not credited with intentions, the baby is established and supported as an equal partner as the result of the mother imputing communicative value to the child's spontaneous actions, as if the child intended to appropriately initiate or reciprocate ideas and tasks that reference the book. This type of scaffolding promotes language development and enhances the child's learning opportunity to learn through active participation in book sharing
- For the prelinguistic child, mother-infant communication is more closely integrated with and embedded in the nonverbal context than with more mature communicators. Social linguistics in the book sharing context promote the baby's progression to language comprehension when the mother's silent gestures such as pointing, facial expressions, eye contact, and body movements such as posture and body contact appropriately emphasize, illustrate, clarify, and substitute for the semantic content of her words.
- The progression toward interacting with books as a literacy artifact is facilitated in a reciprocal relationship that builds upon the infant's natural expressions as a vehicle for introducing the child to a range of ideas and skills that are conventional to interacting with picture books

1. Positive regard for interacting with books as sources of enjoyment is fostered when the mother models positive attitudes toward the infant's participation as well as her own.

2. Skills associated with physically managing books are fostered when the infant's tactile behaviors toward the book are encouraged and channeled into book-related tasks that approximate the behavior

3. Positive regard for books as sources of information is fostered when the content of dialogue includes labeling pictures, encoding meaning that complements the ideas contained in pictures, and when dialogue relates to the infant's real life encounters with objects or scenes.

Implications for the Research and Professional Communities

The Research Community

Researchers may use the findings from this inquiry in the following ways: Questions emerged that may further our insight, and variables were identified that may serve to focus future research on book sharing in the mother-infant dyad.

Communicative competence, that is, the ability to engage and sustain mutual turns (joint-action tasks) doing and saying something that referenced the book, was the salient variable that distinguished the mother-infant book-sharing dyads. Why were some dyads able to accomplish the turn-taking model of dialogue and others were not? The following questions and speculations stimulate thinking

1. Did the variations in communicative competence represent three different phases through which mothers and their infants progress to achieve the quality of rhythm and reciprocity required for joint-action tasks? If so, it might be expected that the difficulties associated with achieving book "sharing" dialogue may undergo self-righting as the mother-infant dyad matures.

2. Were the variations among the three types of dyads the result of differences in the frequency of interacting with a book prior to the event that was observed?

3. What is the role of socio-cultural heritage in mother-infant book sharing? It might be expected that conventions in the mothers' cultural milieu such as oral language patterns, styles for interacting (communicating) with a baby, and customary adult literacy activities would influence the book sharing context. For example, mothers who do not customarily consider infants as communicators might be less responsive and more directive during book sharing with their babies. Mothers who frequently read as a source of leisure and entertainment may have framed the activity within a playful psycho-social atmosphere because they wanted to communicate the idea to their infants that interacting with the ideas contained in pictures is a source of pleasure and information. Conversely, mothers whose use of print is primarily instrumental (a source for obtaining information in order to achieve goals) may have intended to frame the activity in a formal teaching-learning atmosphere because they wanted to communicate to their infants that interacting with a book is not the same as play; rather, learning to "read" is a way to "learn" from books (gather information). Therefore the mothers placed strict demands upon their infants to look and listen attentively.

4. Are there variations in the child's later literacy development as the result of the patterns of mother-infant book-sharing dialogue? It might be expected that children whose experiences of sharing a book were frequently noncommunicative would not develop the same level of appreciation for reading as children whose experiences were usually communicative.

5. Did the communicative model that characterized the book sharing context also characterize the pattern of social interaction in the caregiving environment? It might be expected that organizing joint-action sequences around the book would be contingent upon the dyad's familiarity with the turn-taking feature. If the dyad lacked experience interacting around books but frequently participated in proto-conversational activities such as the "Peek-a-Boo" game, their ability to initiate and reciprocate joint-action tasks in the book sharing context would be facilitated by previous social interplay that is governed by or similar to the turn-taking pattern. On this basis, the initial discord in the marginally-communicative dyads may have appeared until the mother was able to adapt an existing pattern to a new event. In noncommunicative dyads, discord may have prevailed because the quality of social interplay that permeated their care-giving environment was not transferable to the turn-taking model of book sharing.

6. Might variations in the patterns of book sharing be related to the effects of prematurity? Would the difficulties associated with noncommunicative dyads improve as the result of frequent experiences with book sharing? Is the phenomenon of communicative competence in early infancy a natural progression that may not benefit from book sharing?

7. Are these communicative patterns typical of other preterm dyads? Is book sharing in the full-term mother-infant dyad similar in terms of the processes and progressions through which the infant acquires the skill to jointly participate in sharing a book?

In summary, more studies of mothers reading to infants who were born prematurely and high risk for developmental delays are needed to understand the role that the social dynamics of book sharing play in the infants' progression to acquiring literacy. The findings from this study indicate that book sharing cannot be studied from the mother's behavior alone; rather, the infant plays an equally important role in constructing the interaction. The point is, if the objective is to *share* a book, what difference does it make how many times the mother points to and labels an item or elaborates on the contents of the book if the baby is averting gaze or if nontask-related exchanges dominate the interaction? The continuities and variations in book sharing observed in this study raised questions regarding the function of socio-cultural traditions in book sharing, suggesting that future studies should focus on interactional descriptions that also address understanding how socio-cultural traditions govern practices for book sharing.

The Professional Community

The findings from this study may serve as a contextual source for defining the nature of the process and developing guidelines for the recommendation "read to your infant." These findings may be informative to professionals who work with mothers and their prematurely born infants, as a source from which to recommend practices that facilitate sharing a book with their babies.

On the basis of the composite picture that was drawn from these book sharing episodes, it appeared that most of the mothers needed to develop rational expectations for what they were trying to accomplish with their prelinguistic partners and expectations for how they might facilitate the outcome. The following recommendations appear to be key guidelines in facilitating sharing a book with an infant.

1. Begin by establishing the idea of what "share a book with your infant" means (i.e., develop a broad idea of what is to be accomplished). On the basis of this study, the main idea is to establish a conversational-like flow of exchanges that give the appearance of partners taking turns doing and saying something that references the book.

2. Develop a routine that encourages the infant's participation and promotes positive regard for the activity.

Step One: Set the stage for attentive participation by arranging the physical environment to avoid distractions.

Recommendations:

- Remove toys and other distractions in the environment.
- Ensure physical comfort by arranging posture that facilitates visual and physical access to the book. The five positions that were described in this study are suitable to these qualities. However, regardless of the position, the reciprocal quality of the interaction may be jeopardized if the mother restricts the baby's tactile behaviors toward the book.

Step Two: Establish coorientation with the baby.

Recommendations:

- Get the infant to focus attention on the book: Point to and talk about a picture. The baby will usually track the moving hand.
- Follow the baby's line of vision and synchronize responses by composing a dyadic script that incorporates the baby's ocular and tactile behaviors toward the book.
- Use a warm moderate voice and expressive tones. Display affectionate gestures that indicate pleasure and positive regard for the activity.

Step Three: Identify a prominent infant behavior toward the book and organize a joint interaction sequence around the book.

Recommendations:

- Learn the activity or action sequences that the infant favors or enjoys by monitoring the child's conduct for a frequent or preferred tactile and/or visual act toward the book.
- Incorporate the action into an exchange sequence. Stabilize the pattern by coordinating a repetitive, reciprocal response sequence to complement the infant's pattern.

- At the same time, compose a dyadic script around the baby's action that reflects ideas and tasks that are appropriate for interacting with a book
- As the baby becomes entrained in book sharing (i.e., reliably responds within the repetitive cycle), advance the teaching learning content by incorporating other actions into the book sharing conversation. Encourage the child to emit behaviors by assisting the performance of a gesture that the baby is capable of emitting

Step four: End book sharing when the infant signals closure.

Recommendations:

- Become familiar with the infant's cues that signal fatigue or overload
- Respect the infant's need for cycles of looking at and looking away from the book
- Respect the infant's bid to end book sharing.
- Frequently monitor the baby's face; the mother and the infant's eyes and facial expressions are powerful communicators

The recommendation to read with an infant needs to be accompanied with information that supports the developmental characteristics of the child. For example, advice to mothers in this study might include satisfying their baby's urge to mouth the book. Six months is a *teething time* that greatly influences babies' behaviors. Unless the infant's urge is satisfied (e.g., with a pacifier),

book sharing is likely to be a challenge in that the mother and baby do not share the same agenda. The baby's urge is to use the book as a soothing device, while the mother's intentions are related to interacting with the book as a literacy artifact. Hence, recommending developmentally appropriate ways for supporting the child's interests and needs would facilitate sharing a book with an infant.

Summary and Integration

Book sharing, as portrayed by these mothers and their infants, was similar in the way mothers organized the experience but dissimilar in what the mothers accomplished. The similarities in their responses indicated that these mothers embraced a culturally specific conception of the experience. The standard components in the discrete actions that comprised the mother's behavioral dialogue, the organization of activity into a three-phase format, the turn taking joint-task-model of dialogue that the mothers projected, and the inferences of teaching-learning outcomes in the content of their behavioral dialogue suggested that the conventions in the mothers' book-sharing practices were not happenstance occurrences. Rather, most of the participants appeared to carry out a predetermined notion, which was perhaps a culturally acquired tradition, of what should take place.

The starting point of this inquiry was to provide a descriptive analysis of mother-infant book sharing in a preterm infant sample and to draw inferences about what and how dimensions of interactions between mother and baby influence the child's emergent literacy development. Book sharing was conceived as a cultural construct and therefore an interactive literacy event capable of being discerned through the observable expressions and conduct

that the 13 mothers employed to carry out the request "Would you please share a book with your child?"

It is apparent from the findings that the value of reading to a baby is that as the result of being emerged in the experience over a period of time, the child gradually acquires cognitive and instrumental skills that facilitate interacting with a book as a literacy artifact (*reading*). The infant's advancement to the acquisition of meaning and skills is a socially mediated process that is enhanced within a reciprocal relationship that supports the child's active participation. This reciprocal framework provides an important impetus for channeling the baby's spontaneous actions into informed and meaningful adaptations to the cultural activity. Concepts such as *intersubjectivity*, *shared meaning*, and *social convergence* have been applied by sociocognitive researchers to characterize the mediation process (Camaioni, 1993, p. 159). Vygotsky's (1978) sociocultural theory provides an account of the mechanisms through which the postulated effects from these episodes of reading to a baby are fulfilled.

From the very first days of the child's development, his activities acquire a meaning of their own in a system of social behavior and, being directed towards a definite purpose, are refracted through the prism of the child's environment. The path from object to child and from child to object passes through another person. (p. 30)

In Vygotsky's view, social relations underlie all higher functions and language (i.e., communication) is the critical link between the child's social and psychological development.

Sociocultural theory gives an explanation of what and how the particulars of sharing a book contribute to the infant's emergent literacy development. When mother and baby interact in a reciprocal context around the book, the

child gains access to a human environment, replete with human tools, that surrounds and permeates human dialogue. Within this framework, the baby is a *cultural apprentice* (Miller, 1981, Rogoff, 1990); the caregiver is a *tutor* (Bruner, 1972; Wood, 1989); a *master* (Miller, 1981), and a *guide* (Rogoff, 1990).

As a novice who is apprentice to his or her mother, the baby starts with a modest level of performance and gradually progresses toward a complete and mature (i.e., adult-like) level of performance as the result of the supportive guidance provided by the mother, the more sophisticated and informed participant (Camaioni, 1993). For example, the baby scratches on the page of the book and the mother, looking with wide eyes into the infant's face, says pleasantly, "You want to get it out, huh? Yeah, you want to get it out, don't you?" Although not crediting the infant with intent at 6 months, the mother's imputation supplies an intersubjective quality that gives the appearance of the infant acting within a social world that makes "human sense" (Bruner & Haste, 1987). Within this context the mother serves as a curator of culture (Trevvarthen, 1988) who instructs the baby in the conventions of the event. Ultimately, the baby learns the appropriate gestures and their meaning as the result of often repeated actions and accompanying imputations.

As the result of her support in action sequences (e.g., helping the baby to hold the pages or the cover of the book), the child is able to act in ways that would otherwise not be possible. In this situation, the mother enables the child to practice and thereby acquire instrumental skills, within the child's "zone of proximal development" (Vygotsky, 1978). Although the mother may not be aware of a particular teaching goal (Adamson, 1995; Rogoff, Malkin, & Gilbride,

1984), she is educating her baby in the cognitive and instrumental skills that are common to the culture of *reading*, as she understands it. Teaching and learning that nurture development are most likely to occur when the adult constructs finely calibrated responses that scaffold and support the baby's actions (Adamson, 1988)--for example, responding contingently to the infant's random behaviors and eliciting behaviors toward the book in order to impute a task related turn for the child.

What we have done is eavesdrop on mothers teaching their baby what it means to "share a book." The findings from this study are based on observations of 13 low SES mothers sharing a book with their 6month-old infants who were born prematurely and sick. Only one other study on mother-infant book sharing has included preterm babies and only one study included low SES mother-infant dyads. In general, researchers have consistently confirmed that the quality of social interaction between mothers and their infants who were born prematurely and sick may not lead to the kind of communicative strategies that normally enhance the baby's development. Given this forecast, if book sharing is to benefit infants who were born prematurely and sick, there is a need to discern the nature of the practice in the preterm mother-infant dyad.

The findings from this study illuminate salient aspects of the nature of the experience. These data are particularly relevant for the communities of professionals who serve the preterm mother-infant population. They suggest explanations of what and how particulars of book sharing might contribute to infants' emergent literacy development. Additionally, they provide a basis for

formulating models of mother-infant book sharing that promote interaction styles presumed to foster optimal teaching-learning outcomes and discouraging interaction styles that are associated with negative outcomes.

APPENDIX
SAMPLE PROTOCOL PAGES

PROJECT: Book sharing in the preterm Mother-infant Dyad

Protocol: # 1
pp. 1-6

Tape # 187
Researcher: P. Aaron

Comments

CLINICIAN: Entered and requested M to
share a book with C.: "Would you please share
a book with your child? You may find one in
the basket."

M and C are seated on the cushioned mat playing
with toys. M picks up the toys that she and C were
playing with and puts them into the basket that is
behind M. C is seated with his back to the basket
and doesn't see that M is removing the toys.

- 1 M: Ready? Come here.
2 Let's get this book out here.
3 O.K.? (Speaking as she takes
4 a book from the basket and
5 rests the book on one leg).
6 M: Get right up here.

- 7 (Picks C up and places him on
8 her lap/upper thigh)
- 9 C: (Reaches for the book on M's
10 leg, then looks toward the
11 toy basket and extends his
12 arm as if reaching for it)
- 13 M: Gotta leave them rings alone.
14 [Indicating that C want's the
15 rings that he was playing
16 with] (Repositions herself and
17 the child, as if trying to stay
18 away from the toy basket:
19 With C enveloped in her arms
20 she uses her body to shield C's
21 line of vision from the toys).
- 22 M: O K. Leave them rings alone
23 just for a minute.
24 So look. (Placing the book in
25 front of C) Listen.
26 Mickey. (Slight pause) Look.
27 (Puts the book before C. Taps
28 the book; glances into C's
29 face)
- 30 C: (Visually follows M's hand,
31 looks intently at the open
32 book. Hits the book)
- 33 M: O. K.
- 34 C: (Reaches for the book with
35 both hands)
- 36 M: (Moves the book out of C's
37 reach
38 while turning the page).
- 39 M: (Warm, crooning whisper)
40 Aaah, look-a-there
41 It's a rabbit.
42 Yeah. (Pause; glances into C's
43 face)
44 Look-a-there. (Points to the
45 picture).
- 46 C: (Looks at the book, then looks
47 away in the direction of the
48 basket that holds the toys).
- 49 M: No you don't get them rings
50 Hide that where you can't see it.
51 [Said as if talking to herself]
52 (Hides the basket by pushing it
53 behind them)

- 54 M: Try it again. [referring to trying
55 to read again]
56 (Opens the book on the floor)
- 57 M: (Repositions C: Seats him on the
58 floor sandwiched between her
59 legs with his back resting against
60 her abdomen)
- 61 C: (Looks down at the open book as
62 M adjusts it)
- 63 M: Here you go.
64 Look-a-there
- 65 C: (Reaches toward the book on the
66 floor. Arms are extended toward
67 the book. It is out of his reach).
- 68 M: (Holding the book up with it
69 positioned in C's line of view).
70 [She seems to be trying to
71 prevent C from grasping the
72 book]
- 73 M: See that? (Pause, glances into
74 C's face) [She can't point because
75 both hands are occupied; she is
76 holding the book off of the floor]
77 Look here
78 It's a rabbit. (Quickly
79 glances into C's face. Places the
80 book back on the floor).
- 81 C: (Tries to turn in the direction of
82 the toy basket).
- 83 M: (Redirects C's line of sight to the
84 book by shifting her body: With
85 his body enveloped in her arms,
86 she leans forward with C toward
87 the book on the floor).
- 88 C: Gasps
89 (Looking at the book. Places both
90 hands on the book, continuously
91 fingering/scratching/exploring it
92 with his palms and fingers).
- 93 M: (Turns the page)
94 There's a birdie with big eyes
95 (Speaking in a moderate tone
96 Points to the picture).
- 97 M: There's a birdie
- 98 C: (Looking at the book,
99 fingering the page).
- 100 M: Look at the birdie (Seems

101 that she is referring to
 102 the picture beneath where C is
 103 fingering]
 104 Pretty colors
 105 (Turns the page)
 106 Look-a-there. (Pause, then
 107 turns the page)
 108 C: (Looking; leans forward into the
 109 book).
 110 M: It won't come out, will it?
 111 [Meaning the picture]
 112 (pauses, watches C visually
 113 explore and finger the page).
 114 M: Won't come out.
 115 M: Kitty cat.
 116 See the Kitty cat?
 117 (Points at the picture that
 118 appears to be the one beneath
 119 where C is fingering).
 120 C: (Looks away from the book).
 121 M: Mickey. [Calling C's name]
 122 Come on, Mickey.
 123 Mickey
 124 (Looking into C's face, shakes
 125 C.'s hand gently as if to get his
 126 attention).
 127 M: You want that light? (Referring
 128 to a picture).
 129 O.K.
 130 (Pulls the book back over toward
 131 C. Taps on the picture with her
 132 index finger).
 133 C: (Visually follows M's hand.
 134 Leans forward over the
 135 book, visually exploring and
 136 fingering the book)
 137 M: There. See which one you go for.
 138 (Spoken playfully. Glances
 139 into C's face then into the book)
 140 See which one you go for, huh?
 141 (Pause, glances into C's face)
 142 [As if Meaning it's your turn I'm
 143 looking to see which picture you
 144 will attend to]
 145 (Spreads the book out to display
 146 the pictures)

(Continued)

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Patricia Eleanor Montgomery-Aaron, the middle of three children, was born in Montgomery, Alabama, to E. A. and Jean (Moye) Montgomery. She is the sister of Arnold and Ernie Montgomery, and she has one son, Patrick.

Patricia completed kindergarten through 12th grade at Alabama State University laboratory school. She earned the Bachelor of Arts in history and sociology from Tuskegee University, the Master of Arts and the Education Specialist in elementary education from Auburn University-Montgomery. She completed the doctorate in instruction and curriculum at the University of Florida. She has worked in public and private schools in Georgia, California, and Alabama. Patricia is a member of the faculty of the Department of Curriculum and Instruction at Alabama State University.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


Linda Leonard Lamme, Chair
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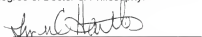
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